

Business effects of a bear market

(Page 95)



BUSINESS WEEK

A McGRAW-HILL PUBLICATION

FIFTY CENTS

NOV. 2, 1957



P. Lorillard's Lewis Gruber:

His runaway Kents, he thinks,
are riding a revolution in
the cigarette industry

(Marketing)



Harvest time is no time for maintenance!

No one knows the importance of proper timing better than a farmer. Equipment has to be ready *when it's needed!* One breakdown—like a bearing failure—and everybody loses. Lost crop . . . lost money . . . and, for the equipment manufacturer, a lost customer.

That's why so many farm equipment manufacturers insist on dependable Bower Roller Bearings. Basic design improvements like those shown at right have made bearing failure a rarity. In addition, Bower's use of quality material, plus close attention to engineering detail, has virtually eliminated all maintenance requirements—makes these rugged bearings last longer, perform better.

Whatever *your* product, specify Bower Roller Bearings. Choose from a complete line of tapered, straight and journal roller bearings for every field of transportation and industry.

BOWER ROLLER BEARING DIVISION

FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 14, MICHIGAN



ADVANCED SPHER-O-HONED DESIGN
REDUCES WEAR

Spherically generated roll heads • Higher flange with larger two-zone contact • Larger oil groove • Honed races.

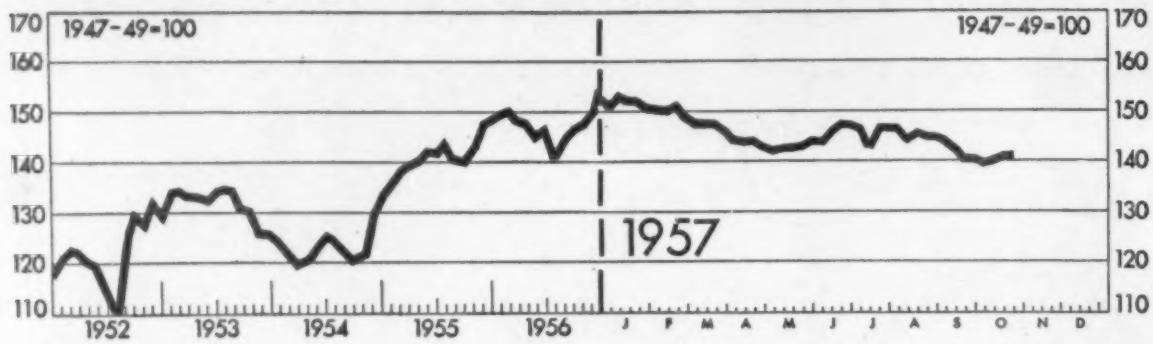


BOWER ROLLER BEARINGS

IN BUSINESS THIS WEEK November 2, 1957

GENERAL BUSINESS	RISING UNEASINESS BRINGS NEW WHITE HOUSE MOOD. The Ad- ministration plans a campaign of reassurance.....	39
	SHEFFERMAN'S 400 CLIENTS. Probers charge "union-busting" tactics by con- sultant firm; many companies hiring it deny accusation.....	41
	LINED UP FOR THE '58 AUTO SALES RACE.	42
	WHAT ROGERS FACES AS A FIRST-TEAM MAN. New attorney gen- eral will have some headaches, but no policy shift is likely.....	44
	TREASURY'S EYE IS ON CEILING.	46
	WALL ST. TAKES ITS BEARINGS. Is this week's calm the lull before another storm?	47
	PROFITS SHRINK EACH QUARTER.	48
	MORE INSURANCE, LESS MONEY. Under a popular new way to figure premiums, the bigger the policy, the less it costs per \$1,000.....	50
	IN BUSINESS. News about Bethlehem-Youngstown merger, divesting du Pont of GM stock, brickbat exchange between Nashville's feuding department stores..	52
<hr/>		
THE DEPARTMENTS		
BUSINESS ABROAD:	In Business Abroad	106
	Coalition Bid in France Flops. The country goes deeper into economic chaos....	108
	The Woman Behind Japan's Comeback In Silk. Mrs. Marion Tilton, U. S. textile buyer, helps an industry lose its conservatism.....	112
	Guatemala Back to Status Quo. It will try again to elect a president.....	116
ECONOMICS:	Now the Trick Is to Blend Them. Committee of economists recommends integrating the five basic measures of national economic activity.....	61
FINANCE:	Dark Skies for Airline Earnings. The jet-plane re-equipment program is in jeopardy Will the Bears Lead Them Down? How a stock market decline kicks back.....	87
		95
GOVERNMENT:	In Washington	153
	Basic Research. McElroy cancels Wilson's cut in military spending for R&D. And the National Science Foundation urges a stepped-up program.....	154
	Atomic Clue. British accident may have link to atomic fusion experiments.....	154
LABOR:	Troubles Besiege the Teamsters.	131
	Unions Claim One Out of Every Four. Labor Dept.'s nose-count shows that mem- bership is on the rise, despite slowdown in organizing drives.....	136
	In Labor	139
MANAGEMENT:	In Management	120
	Option Holders Stay Cheerful. Despite drop in value, their holders aren't com- plaining	125
MARKETING:	Time to Change Adman's 15%?.....	155
	Lorillard: Soaring Skyward on a Filter Tip. To back up Kent's rocket rise, Pres. Gruber has a fistful of other bets (cover).....	158
	In Marketing	162
THE MARKETS:	Second Thoughts on the Rally. Other, even sharper rallies, have failed to stem the development of a bear market.....	165
NAMES & FACES:	Businessman in the State House—Gov. Luther Hodges.	66
PRODUCTION:	Now Planes Can Break the Instrument Barrier. New simplified instrument panel promises relief for dial-weary pilots, safer flying for everybody.....	172
	Aluminum Cans ... are poaching on tinplate preserves.....	180
	New Products	182
REGIONS:	Michigan Throws a New Line to Old Outpost. Mackinac Bridge is expected to usher in an era of new industrial development for upper Peninsula.....	140
	Regional Income. Up 5.3% in August over year-before month.....	144
RESEARCH:	In Research	193
	Wind Tunnels Bring High-Altitude Flight Conditions Down to Earth.	194

FIGURES OF THE WEEK



BUSINESS WEEK INDEX (chart)

1946 Average	Year Ago	Month Ago	Week Ago	\$ Latest Week
91.6	149.4	141.0	†141.5	*141.8

PRODUCTION

Steel ingot (thous. of tons).....	1,281	2,493	2,115	†2,052	2,024
Automobiles and trucks.....	62,880	133,132	62,167	96,311	130,797
Engineering const. awards (Eng. News-Rec. 4-wk daily av. in thous.).....	\$17,083	\$72,395	\$52,764	\$55,381	\$56,938
Electric power (millions of kilowatt-hours).....	4,238	11,391	11,697	11,684	11,787
Crude oil and condensate (daily av., thous. of bbls).....	4,751	6,998	6,821	6,747	6,766
Bituminous coal (daily av., thous. of tons).....	1,745	1,756	1,678	1,652	1,648
Paperboard (tons)	167,269	278,432	300,659	308,059	294,159

TRADE

Carloadings: miscellaneous and l.c.l. (daily av., thous. of cars).....	82	77	67	69	68
Carloadings: all others (daily av., thous. of cars).....	53	61	53	55	53
Department store sales index (1947-49 = 100, not seasonally adjusted).....	90	129	126	132	129
Business failures (Dun & Bradstreet, number).....	22	267	278	258	281

PRICES

Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100).....	311.9	418.6	394.7	388.0	385.5
Industrial raw materials, daily index (BLS, 1947-49 = 100).....	††73.2	97.3	88.2	86.3	85.6
Foodstuffs, daily index (BLS, 1947-49 = 100).....	††75.4	80.6	81.9	82.6	82.8
Print cloth (spot and nearby, yd.).....	17.5¢	19.2¢	17.8¢	17.6¢	17.5¢
Finished steel, index (BLS, 1947-49 = 100).....	††76.4	168.6	181.5	†181.7	181.7
Scrap steel composite (Iron Age, ton).....	\$20.27	\$57.50	\$40.83	\$35.33	\$34.00
Copper (electrolytic, delivered price, E & M, lb.).....	14.045¢	36.120¢	26.910¢	26.770¢	26.630¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$1.97	\$2.32	\$2.12	\$2.14	\$2.13
Cotton, daily price (middling, 1 in., 14 designated markets, lb.).....	**30.56¢	33.14¢	33.33¢	33.58¢	33.71¢
Wool tops (Boston, lb.).....	\$1.51	\$1.94	\$2.08	\$2.00	\$2.00

FINANCE

500 stocks composite, price index (S&P's, 1941-43 = 10).....	17.08	46.09	42.68	39.97	40.69
Medium grade corporate bond yield (Baa issues, Moody's).....	3.05%	4.19%	4.97%	5.00%	5.02%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate).....	3/4-1%	3% %	4%	4 1/4 %	4 1/4 %

BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks.....	††45,820	56,206	54,788	54,744	55,383
Total loans and investments, reporting member banks.....	††71,916	85,584	86,558	87,292	86,539
Commercial and agricultural loans, reporting member banks.....	††9,299	29,692	32,408	†32,103	31,805
U. S. gov't guaranteed obligations held, reporting member banks.....	††49,879	26,057	24,537	25,346	25,270
Total federal reserve credit outstanding.....	23,888	25,866	25,622	25,451	25,407

MONTHLY FIGURES OF THE WEEK

	1946 Average	Year Ago	Month Ago	Latest Month
McGraw-Hill Indexes of New Orders (1950 = 100)				
New orders for machinery, except electrical.....	September.....	N.A.	154	146
Construction & mining machinery.....	September.....	N.A.	150	151
Engines & turbines.....	September.....	N.A.	132	153
Pumps & compressors.....	September.....	N.A.	176	156
Metalworking machinery.....	September.....	N.A.	156	127
Other industrial machinery.....	September.....	N.A.	128	134
Office equipment.....	September.....	N.A.	120	166
New contracts for industrial building.....	September.....	N.A.	195	140
Imports (in millions).....	August.....	\$412	\$1,055	\$1,146
				\$1,042

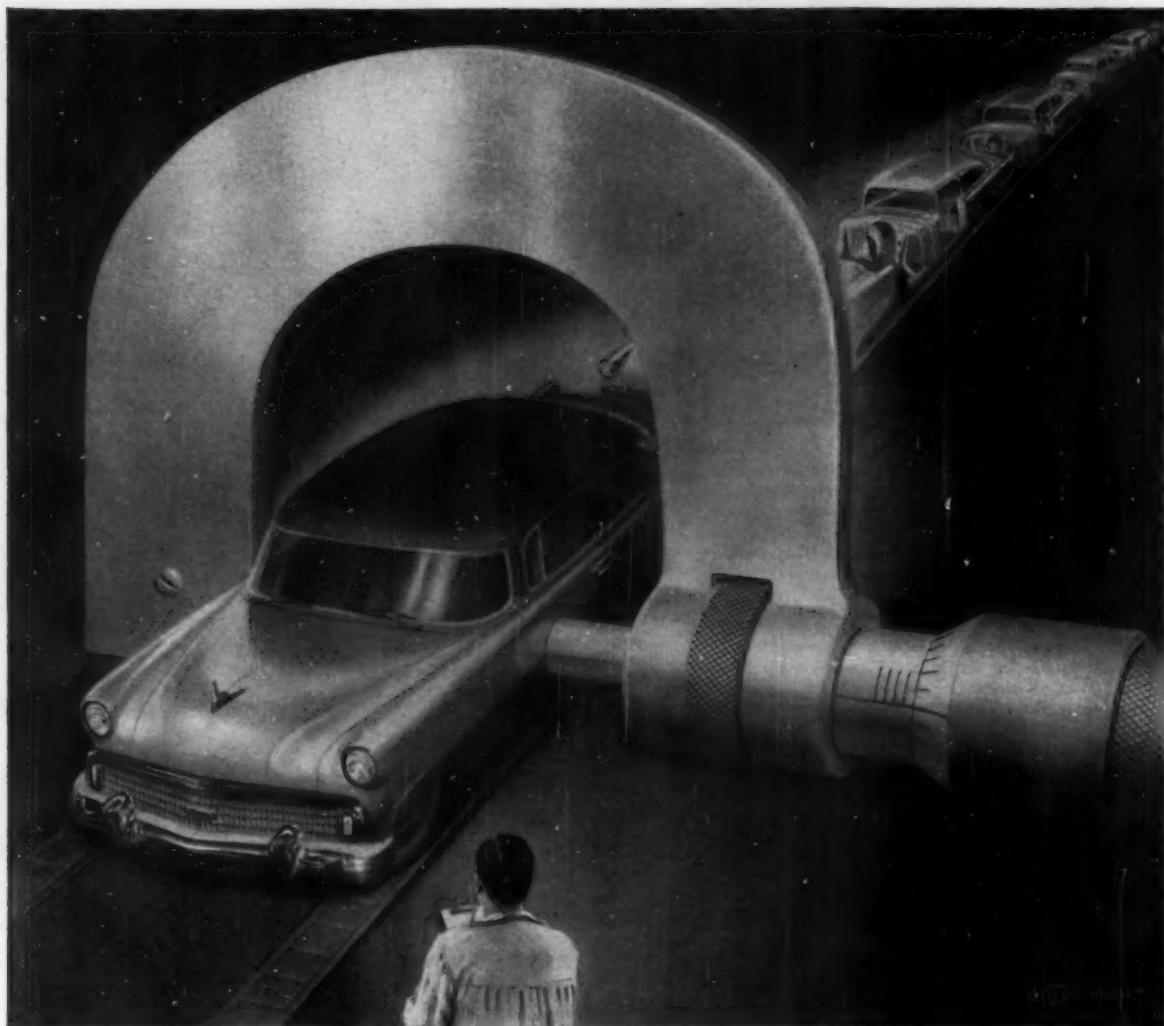
* Preliminary, week ended October 26, 1957.
† Revised.

** Estimate.
†† For designated markets, middling 1 1/2 in.

§ Date for 'Latest Week' on each series on request.

THE PICTURES—Otto Barnz Co.—182; Douglas Aircraft Co.—172 (top), 173 (lt.), 174 (bot.); Cameramen, Inc.—44; I.N.P.—39 (top rt.), 131 (bot.), 132 (rt.); Jack Jones—194 (lt.), 197; Herb Kravovil—cover, 42 (top lt. & bot. 4), 57 (top rt.), 158, 160; Edith Miller—68, 71, 72, 74; Jean Launois—112, 113, 114; Leonard Nadel—172 (bot.), 173 (rt.), 174; Mackinac Bridge Authority—140, 141; Rensselaer Polytechnic Institute—193; Joan Sydow—42 (top rt.), 43; U.P.—39 (top lt.), 132 (lt.); U. S. Air Force—194 (top rt. & bot. rt.), 195; W.W.—39 (can. rt. & bot.), 40 (top), 106, 120, 131 (top).

"VISION IS INDISPENSABLE TO PROGRESS"



The tools men teach to "think" —to mastermind mass production

A low-priced automobile might cost \$50,000 were it not for mass production. The machine tool industry is the cornerstone of mass production —whose products range from zippers to cars.

Skilled manufacturers construct tools, dies, jigs, gauges and intricate production machines. To make one jet aircraft engine requires 20,000 tools! Versatile drills, grinders, lathes and tremendous milling machines cut, pierce and shape metals to tolerances 1/30th the width of a human hair.

Raw materials can be transformed

into finished products by batteries of machines controlled entirely by electronics. One such machine is so conscientious it tries to correct any error, shuts itself off when it can't!

In its Herculean contributions to our progress in peace and our victories in war, the machine tool industry typifies the production achievements continually encouraged by

our free, competitive business system.

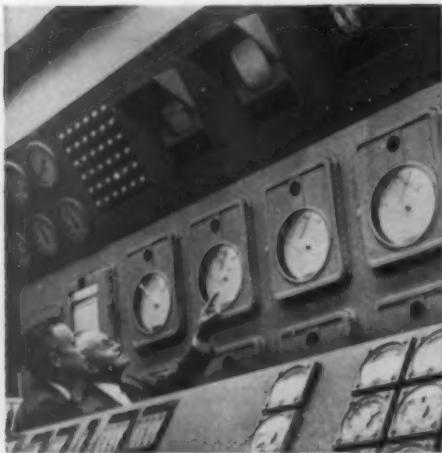
Behind every machine tool company you'll find a bank working on close, friendly terms with the treasurer, supplying essential financial services. With our correspondent banks, we provide every type of banking service to this and many other progressive industries. *How can we help you in your business?*

BANKERS TRUST COMPANY

16 Wall Street, New York 15, N. Y. Rector 2-8900



Member
Federal
Deposit
Insurance
Corporation



"Television enables the men in the Control Center of the Weston Power Plant to check on the fire and water levels inside the boiler. See the screens at the top of this picture. Mr. M. H. Montross, Division Manager, showed me this TV system at the new plant of the Wisconsin Public Service Corporation. It's one of the imaginative devices that keep all operations under constant scrutiny and immediate control at one point in the plant."

"Feeding the ducks was the big event of the Wausau visit for Michael and Teresa, the two youngest of our five children. 'Red' Liljequist of the Lake Wausau Sportsman's Club took us to Picnic Island . . . 'talked duck' . . . and a whole flock came scooting to where we stood. Everyone in Wausau seems interested in the wild mallards that nest in this vicinity. Members of the Sportsman's Club contribute to the feeding fund and Wausau children—Junior Game Wardens, they're called—see that the ducks are fed and protected."²³



TV keeps an eye on the fire...

Everybody watches out for the ducks



Wausau Story

by P. E. HAGGERTY, Executive Vice President, Texas Instruments Incorporated, Dallas, Texas

"DURING our vacation, my family and I visited Wausau. It's a beautiful place, a city of pleasant homes and pleasant streets . . . with a nearby lake, two rivers, and even a mountain. Yes, there's plenty to see in Wausau—everything is interesting and some things are truly unusual. For one thing, there's a community spirit that is unique. It's warm, friendly, helpful. It's sincere. And it's strong—so strong in fact, that it has inspired a business philosophy that businessmen everywhere recognize as the

'Wausau Way' of working. That's the way Employers Mutuals people work—at their home office in Wausau and at all their offices throughout the country. The 'Wausau Way'—having your heart in your work. That's how they've gotten the reputation for being 'good people to do business with'."

Mr. Haggerty represents the electronic business—today's newest and fastest-growing basic industry. You get an idea

of this fast-paced development when Mr. Haggerty tells you 85% of the products produced by his company today were not being manufactured three years ago. Employers Mutuals appreciates Mr. Haggerty's visit to Wausau and his interest in our city and our way of doing business. We write all lines of fire and casualty insurance. We are one of the largest in the field of workmen's compensation. For further information see your nearest representative (consult your telephone directory) or write to us in Wausau, Wisconsin.

Employers Mutuals of Wausau



"Good people to do business with"

BUSINESS WEEK

EDITOR & PUBLISHER Elliott V. Bell
MANAGING EDITOR Kenneth Kramer

ASSISTANT MANAGING EDITOR Robert B. Colborn
ASSOCIATE MANAGING EDITORS John L. Cobbs, Peter French, Eugene Miller
SENIOR EDITORS
Clark R. Pace, Merlyn S. Pitzele, Howard Whidden

DEPARTMENTS

Business Outlook: Clark R. Pace, *Editor*; Sam I. Nakagama
Economics: Leonard Silk, *Editor*
Finance: William McKee Gillingham, *Editor*; Albert C. Lasher
Foreign: Howard Whidden, *Editor*; Sol Sanders, Paul Finney
Industrial Production: Theodore B. Merrill, Jr., *Editor*; C. Peter Buckley, William L. Smith
Labor: Merlyn S. Pitzele, *Editor*; Edward T. Townsend
Management: Lee Geist, *Editor*; Edward McCreary
Marketing: Richard L. Waddell, *Editor*; Cora Carter, Jack E. Patterson
Money & Credit: M. J. Rossant, *Editor*
Personal Business: Joseph L. Wiltsie, Marilyn Holmes
Regions: Werner Renberg, *Editor*
Research: Jane H. Cutia, *Editor*
Statistics: Elsa Denno
News Editors: T. B. Crane (*Senior News Editor*), Jeanne A. Bernhardt, Robert F. Deed, John A. Dierdorff, Lawrence H. Odell, Doris I. White
Staff Writers: John H. Maughan
Editorial Assistants: Mary T. Beckerle, Edward J. Burgess, Jr., Jean Drummond, John Hudor, Kathleen Kundel, Irwin Lainoff, Ann Woods
Illustration: Richard A. Wolters, *Editor*; Robert Isar, *Pictures*; Louis H. Dufault, *Graphics*; Grant Compton, Jack H. Fuller, Herbert F. Kratovil, Jomary Mosley, Arthur Richter, Joan Sydow
Library: Jane G. Racza, *Librarian*
Assistant to the Editor and Publisher: Gerald W. Schroder

MCGRAW-HILL ECONOMICS STAFF

Dexter M. Keezer, *Director*; Theodore C. Boyden, William H. Chartener, Douglas Greenwald, Robert P. Ulin

U.S. & CANADIAN NEWS SERVICE

Atlanta Bureau: Glenn McCullough, *Manager*, Frances Ridgway
Boston Bureau: Brenton Welling, Jr., *Manager*; Lucie Adam
Chicago Bureau: Merlin H. Mickel, *Manager*, Franklin N. Karmatz, Joanne Sponsler
Cleveland Bureau: John K. Pocklet, *Manager*; Michelle Perry
Detroit Bureau: William Kroger, *Manager*
Houston Bureau: Norman DuBeau, *Manager*
Los Angeles Bureau: Thomas M. Self, *Manager*; James P. Roscow, Margaret W. Hayes
Milwaukee Bureau: Keith G. Felcyn, *Manager*; Kathleen C. Horan
Philadelphia Bureau: W. B. Whithard, Jr., *Manager*; Esther A. Schultz
Pittsburgh Bureau: Richard N. Larkin, *Manager*; George W. New, Elinore S. Thomas
San Francisco Bureau: Richard Lamb, *Manager*; Margaret J. Scandling
Toronto Bureau: John D. Harbron, *Manager*; Jean Ross-Skinner
Washington Bureau: George B. Bryant, Jr., *Manager*; Alan E. Adams, Glen Bayless, Roy Calvin, Ernest Conine, John C. L. Donaldson, Jay Flocken, Boyd France, Sam Justice, Arthur J. Kraft, Donald O. Loomis, Gladys Montgomery, Arthur L. Moore, Seth Payne, Morton A. Reichek, V. Craig Richter, Caroline Robertson, Vincent Smith

MCGRAW-HILL NEWS SERVICE

Manager: John Wilhelm; **Beirut:** O. M. Marashian; **Bonn:** Morris Helitzer, Thomas Berendt, Silke Brueckler; **London:** William J. Coughlin, John Tunstall, Robert Gibson, Derek Barlow; **Melbourne:** Alicia Grobtsch; **Mexico City:** Jack Kearney; **Paris:** Robert E. Farrell, Helen Avati; **Rio de Janeiro:** Peter Weaver; **Tokyo:** Dan Kurzman; **Atlanta:** Charles T. Dixon, Jr.; **Cleveland:** William G. Meldrum; **Dallas:** Kemp Anderson, Jr., Mary Lorraine Smith; **Detroit:** Donald MacDonald, Nancy Ann Moore; **Los Angeles:** John K. Shinn, Michael J. Murphy; **San Francisco:** Margaret Ralston, Jeness Keene, Sue Johnson

ASSOCIATE PUBLISHER Bayard E. Sawyer
ADVERTISING MANAGER John M. Holden
BUSINESS MANAGER Richard E. McGraw



BUSINESS WEEK • NOVEMBER 2, 1957 • NUMBER 1470

(with which are combined *The Annalist* and *The Magazine of Business*) Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw (1860-1948), Founder. **PUBLICATION OFFICE:** 99-129 North Broadway, Albany 1, N. Y. See panel below for directions regarding subscriptions or change of address. **EXECUTIVE, EDITORIAL, CIRCULATION AND ADVERTISING OFFICES:** McGraw-Hill Building, 330 West 42nd Street, N. Y. 36, N. Y. Donald C. McGraw, President; Joseph A. Gerard, Executive Vice President; L. Keith Goodrich, Vice President and Treasurer; John J. Cooke, Secretary; Nelson Bond, Executive Vice President, Publications Division; Ralph B. Smith, Vice President and Editorial Director; Joseph H. Allen, Vice President and Director of Advertising Sales; A. R. Venzian, Vice President and Circulation Coordinator. Subscriptions to *Business Week* are solicited only from management men in business and industry. **POSITION AND COMPANY CONNECTION MUST BE INDICATED ON SUBSCRIPTION ORDERS. SEND TO ADDRESS SHOWN IN BOX BELOW.** United States subscription rates for individuals in the field of the publication, \$6 per year; Canada, \$7; other Western Hemisphere countries and the Philippines, \$20; all other countries, \$25. Single copies, 50¢. Second class mail privileges authorized at Albany, N. Y. Printed in U. S. A. Title registered in U. S. Patent Office. © Copyright 1957 by McGraw-Hill Publishing Co., Inc. All rights reserved.

SUBSCRIPTIONS: Send subscription correspondence and change of address to Subscription Manager, *BUSINESS WEEK*, 330 W. 42nd Street, N. Y. 36, N. Y. Subscribers should notify publisher promptly of any change of address, giving old as well as new address, and including postal zone number, if any. If possible, enclose an address label from a recent issue of the magazine. Please allow one month for change to become effective.

POSTMASTER . . . Please send form 3579 to *Business Week*, 330 W. 42nd Street, N. Y. 36, N. Y.

BUSINESS WEEK • Nov. 2, 1957

READERS REPORT

Figure Too Low

Dear Sir:

I found your feature on the Service Industries—the Unknown Half of the Economy [BW—Sep. 21 '57, p190] interesting and informative.

I am not sure of your sources for the 1956 expenditures in specific industries, but I can assure you that your listing of \$756-million for radio and TV repair is far below the correct figure.

We have substantial evidence that the nation's 62,000 major electronic maintenance outlets did a gross volume of \$2.1-billion in 1956. This is the actual expenditure for those people whose equipment was serviced. Of this amount, slightly over 90% was for radio and TV repair, the remainder covered audio, communications and industrial electronic repair. . . .

ALBERT J. FORMAN

EDITOR

ELECTRONIC TECHNICIAN
NEW YORK, N. Y.

• Our figures came from the Dept. of Commerce.

Slips Noted

Dear Sir:

Re: page 93, *India Makes New Pitch For Aid* [BW—Oct. 12 '57, p89], what you meant to say was that "Godfrey L. Cabot, Inc. (not "Cabot Lodge") of Boston is negotiating for participation in a carbon black plant in cooperation with Indian textile magnate Kasturbhai Lalbhai."

The \$10-million figure (mentioned in your article) is an exaggeration, and Mr. Lalbhai's first name has an "r" in it as above.

J. BLYD BRITTON

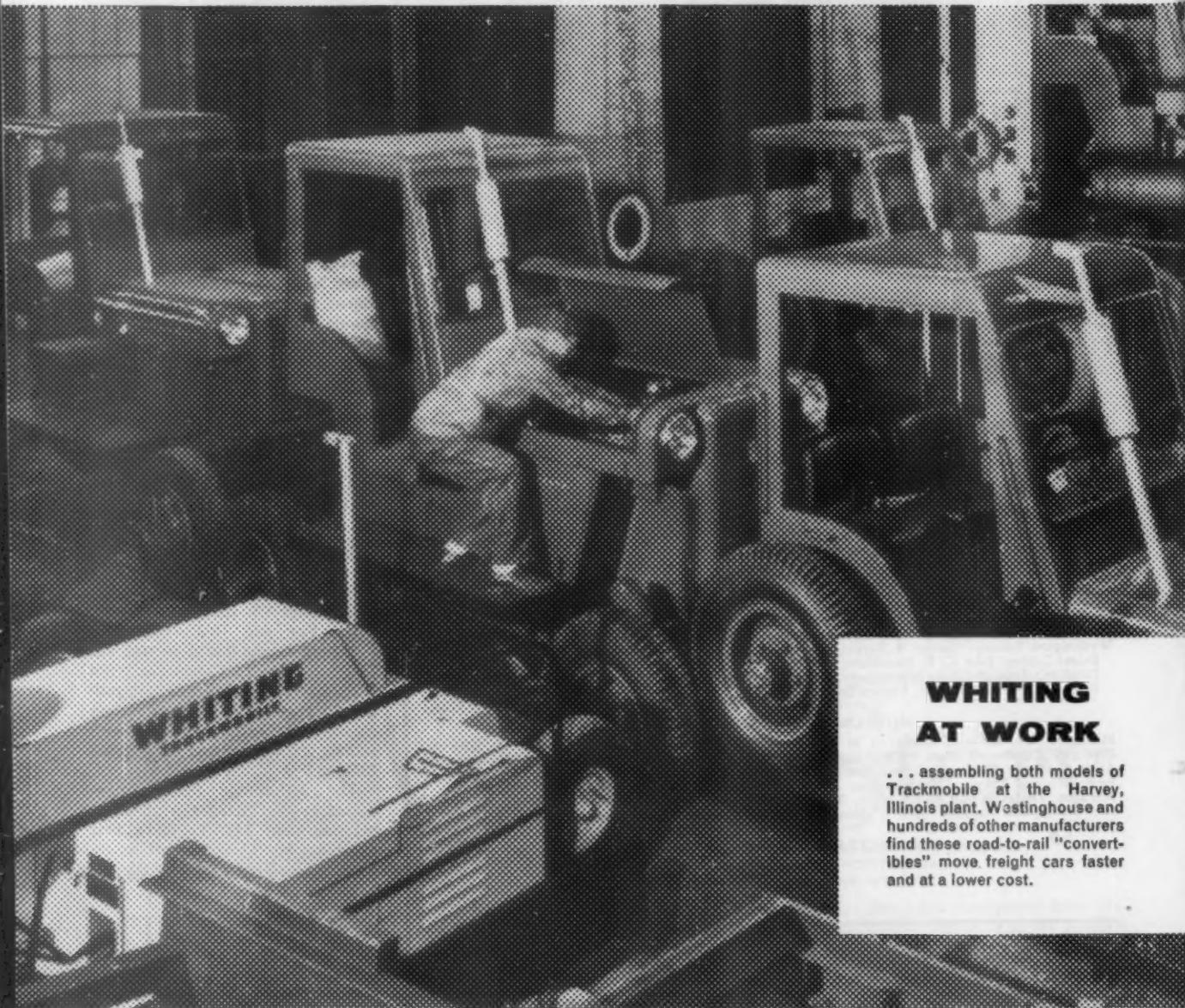
VICE-PRESIDENT, OPERATIONS
GODFREY L. CABOT, INC.
BOSTON, MASS.

Conformity Standard

Dear Sir:

Re *The Fiction-Eye View of Business* [BW—Oct. 12 '57, p187] it might interest you to know that the standard for the standard is now conformity. A widely known psychological testing service justified a less-than-maximum score on an applicant for an above-average management position with the words that the applicant would never be most effective to the corporation

WHITING WORKS



WHITING AT WORK

... assembling both models of Trackmobile at the Harvey, Illinois plant. Westinghouse and hundreds of other manufacturers find these road-to-rail "convertibles" move freight cars faster and at a lower cost.

WHITING

MANUFACTURERS OF CRANES • TRAMBEAM HANDLING SYSTEMS • TRACKMOBILES •

FOR WESTINGHOUSE

AND FOR 87 OF THE TOP 100 CORPORATIONS

Westinghouse has to be sure, too! That's why it relies on Whiting equipment to move parts and products with speed and economy. Whiting Cranes, Trambeam Overhead Handling Systems and Trackmobiles keep traffic on the move, help accelerate production of Westinghouse products for the home and industry.

The engineering and building of dependable materials handling equipment is but one segment of the extensive Whiting operation. Whiting designs and produces the specialized equipment that caters to the profit and proficiency demands of virtually every industry.

THIS IS WHY 87 OF AMERICA'S "FIRST HUNDRED" CORPORATIONS ARE WHITING CUSTOMERS

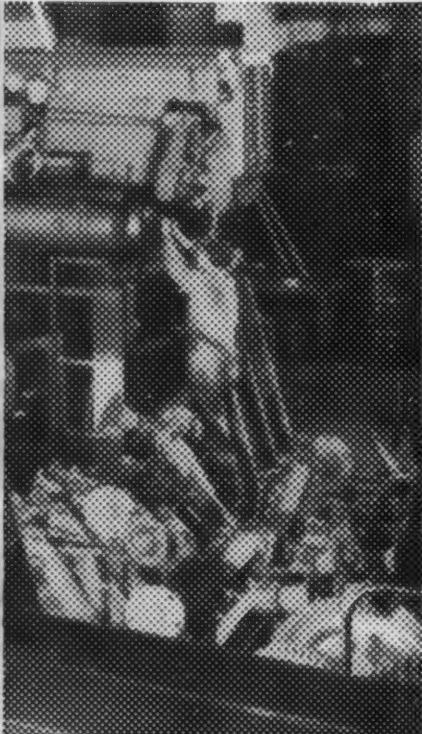
A new, 32-page idea booklet shows how *your* company can benefit from Whiting equipment. "Working for Profit" is filled with on-the-job photographs . . . each classified by type of industry for your convenience. Write today for your complimentary copy of "Working for Profit."



WHITING CORPORATION
15661 Lathrop Avenue, Harvey, Illinois

Whiting Corporation (Canada) Ltd.
78 King Street, Welland, Ontario

Whiting International
30 Church Street, New York 7, New York



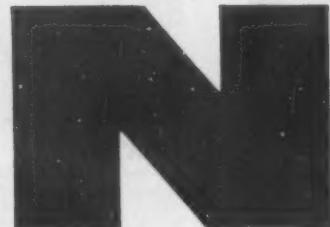
Heavy Duty Trackmobile at E. Pittsburgh plant moves 18 to 20 cars a shift . . . travels on rubber-tired road wheels or steel rail wheels, can't be bottled up.



Jet engines packaged for shipment are handled with a gentle touch on this Trambeam System. Trambeam provides fast, flexible, overhead handling in 85-acre Kansas City jet engine plant.



Westinghouse foundry at Trafford, Pa., pours 100 tons a day from Whiting cupola. Whiting ladies and buckets also contribute to this efficient operation.

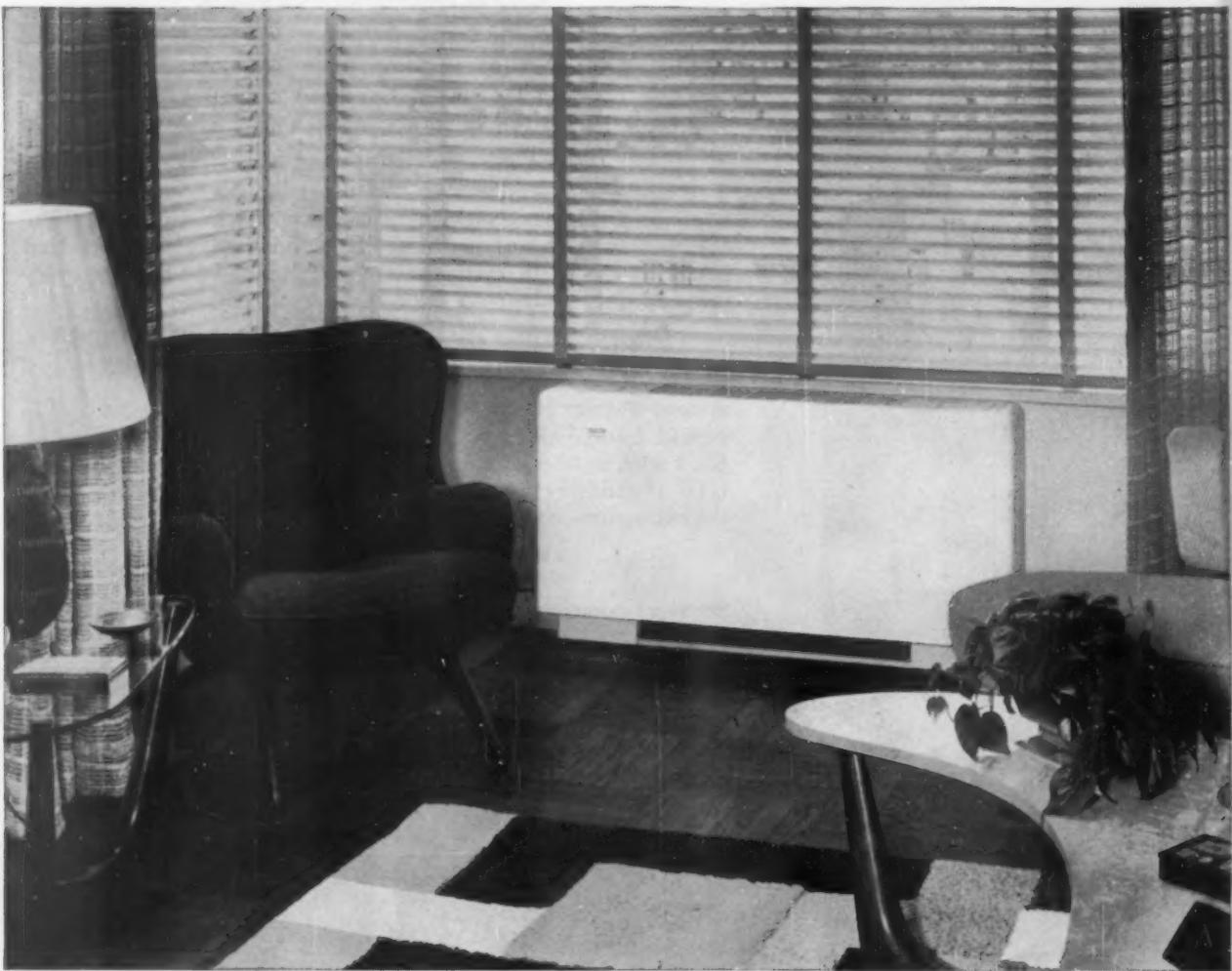


FOUNDRY, RAILROAD AND CHEMICAL PROCESSING EQUIPMENT



A LEADING MANUFACTURER
OF INDUSTRIAL EQUIPMENT
FOR OVER 70 YEARS

Ideal climate for tenants... that's UniTrane

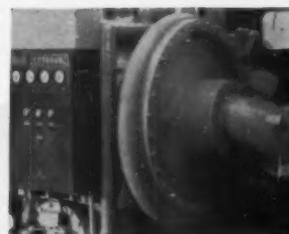


TRANE...SKILLED IN

ALL 4 RELATED

FIELDS OF... AIR CONDITIONING

Chilled water for summer cooling in big buildings is supplied by this fully automatic TRANE CenTraVac that paces itself to supply just the amount of cooling needed.



HEATING

In the home, TRANE Baseboard Convectors stop drafts . . . heat where the cold begins—along outer walls, under windows. You're surrounded with gentle, even warmth!

economy for owners... air conditioning!

For skyscraper apartments or corner stores, Trane changes climates to order!



Here's a five-million dollar New York apartment building with air conditioning that provides luxurious year-round comfort for the occupants—and lowered costs for the building owners! Located in one of New York's most fashionable sections, this 10 East End Avenue Apartment has UniTrane Air Conditioning that combines heating, cooling and ventilating in a single system—provides each occupant with the climate of his choice.

Conditioned air is distributed throughout each room through slim, unobtrusive UniTrane units that use centrally-provided chilled water for cooling . . . warm water for heating. All the air is filtered—and the individual room units may be used for

ventilation only, when there's no need for cooling or heating.

Best of all, UniTrane Air Conditioning cuts costs—for owners and tenants alike. Units are sized to meet room requirements exactly—with no wasted capacity. And the TRANE refrigeration equipment (see CentraVac picture below) cuts power costs by automatically pacing itself to provide just the amount of cooling needed.

Every day, in varied fields, TRANE equipment is changing climates to order—air conditioning buses and trains, ships and planes, giant office buildings and corner stores. TRANE equipment heats and cools factories and schools, hotels and homes—serves everywhere that you find air.

For human comfort or industrial processing—for any air condition—turn to TRANE! See your nearby TRANE Sales Office, or write TRANE, La Crosse, Wisconsin.

Well-known New York builder Stanley R. Broff chose UniTrane Air Conditioning for this new luxury apartment building at 10 East End Avenue, New York City. UniTrane units cool in summer, heat in winter, provide ventilation in every season.



VENTILATING

For year-round heating and cooling systems, TRANE Fans provide quiet, effortless air circulation. Electronically balanced for smooth, trouble-free operation and long life.



HEAT TRANSFER

In modern chemical plants, light-weight TRANE Brazed Aluminum Heat Exchangers help purify gases at temperatures as low as 300 degrees below zero!

For any air condition, turn to

TRANE

MANUFACTURING ENGINEERS OF AIR
CONDITIONING, HEATING, VENTILATING
AND HEAT TRANSFER EQUIPMENT

THE TRANE COMPANY, LA CROSSE, WIS. • SCRANTON MFG. DIV., SCRANTON, PA.
TRANE COMPANY OF CANADA, LTD., TORONTO • 96 U.S. AND 18 CANADIAN OFFICES

What happens down here at 3:48 on a December afternoon?



When lights wink on all over a city, all at once, under-street power cables get *hot*. They actually "grow" and start to bend. This peak-load stretching and bending takes place twice a day, every day, all year round!

Roebling paper power cable with tellurium lead alloy sheath has been designed to cope with these difficult conditions. Its special sheath, for instance, has $4\frac{1}{2}$ times more bending life than ordinary cable sheath. It is stable under heat, resists age hardening and road vibration. And it creeps (stretches) 90% less than the copper-bearing lead sheath used on most cables!

Of course, the power-carrying cable *inside* is constructed with the same careful emphasis on extra life and dependability.

For informative test data showing the unusual economies and advantages of *Roebling paper power cable with tellurium lead alloy sheath*—or facts about the other quality electrical wire and cable produced by Roebling for all types of applications—write Electrical Wire Division, John A. Roebling's Sons Corporation, Trenton 2, New Jersey.

ROEBLING

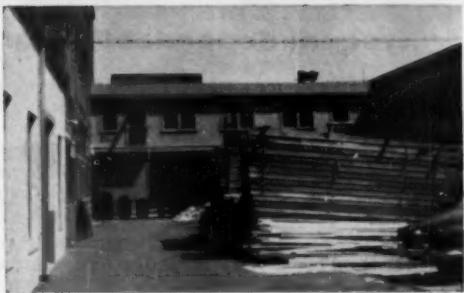
Branch Offices in Principal Cities
Subsidiary of The Colorado Fuel and Iron Corporation





NO SPRINKLER PROTECTION Fire raked through this unsprinklered lumber yard in nothing flat . . . engulfed storage buildings and sheds, thousands of board feet of lumber, and a retail store. Total loss: \$100,000.

only one survived!



GRINNELL SPRINKLERS checked the spread of flames at the Vaughan Lumber Company, Providence, R. I., when fire broke out there during the night. Damage to storage shed and two other buildings was negligible.



Picture *your* business in the event of a fire: office records destroyed; personal shifting to other employment; customers diverted to other sources of supply. Not a pretty picture, is it?

Better by far to have Grinnell Sprinklers on guard — to stop fire at the start. Their fast, automatic, and effective operation is the result of years of research, design improvements, careful manufacture. Every Grinnell Sprinkler System, moreover, is *engineered* and *shop-fabricated* to

eliminate installation errors or delays. It can be erected quickly, expertly — with minimum disruption to normal routine.

Planned for the preservation of your business, Grinnell Sprinklers preserve your dollars, too . . . with insurance savings of between 50% to 90%.

Remember, there *is* a difference in sprinkler performance and service. For complete facts, write Grinnell Company, Inc., 277 West Exchange St., Providence, R. I.

GRINNELL

PROTECTION AGAINST EVERY FIRE HAZARD



MANUFACTURING, ENGINEERING, AND INSTALLATION OF AUTOMATIC* SPRINKLERS SINCE 1878

MILITARY AIRCRAFT MOTOR

passes tests with flying colors



...equal dependability for your product

One of the recent Lamb Electric developments is a motor to drive submerged pumps on military aircraft—for transfer of fuel from reserve to engine tanks.

For such an important application, motor reliability far beyond that normally called for was needed. To insure this degree of reliability in its actual operation of driving the submerged pump, test requirements for the motor were exceptionally rigorous.

As the result of advanced engineering and design, greatly increased brush life, and ability to operate at extremely high temperatures and withstand severe shock tests, the motor passed gruelling tests with flying colors.

The skill and experience exemplified here is available to your company to provide dependable power for your new or redesigned products.

THE LAMB ELECTRIC COMPANY • KENT, OHIO

A Division of American Machine and Metals, Inc.

In Canada: Lamb Electric—Division of Sangamo Company Ltd.—Leaside, Ontario

Lamb Electric
SPECIAL APPLICATION
FRACTIONAL HORSEPOWER MOTORS



because he would never be completely "comfortable" due to a creative urge. This is as far back as I have been able to trace the requirement for conformity, but I think it's far enough. Happy ending, the man was hired anyway.

WALTER G. MITCHELL
TARRYTOWN, N. Y.

Instrument Pioneer

Dear Sir:

We have noted your article titled Chemical Analysis Yields to Push-button Techniques, (BW—Aug. 31, '57, p62), in which you discuss a "testing laboratory serving an alloy shop of a big metals plant being built around a couple of big cabinets containing an emission spectrometer, developed by Dow Chemical and built by Baird Atomic."

I believe you should be aware of the fact that our company brought out the first commercial direct-reading instruments for metal analysis and that we have consistently outsold the Baird Atomic Co. in this field by a wide margin. . . . I believe that it is only fair to call your readers' attention to our position in this field. . . .

DR. M. F. HASLER
PRESIDENT
APPLIED RESEARCH LABORATORIES
GLENDALE, CALIF.

Well Done

Dear Sir:

I thought your report on Louisville, (BW—Oct. 12, '57, p173) was excellent.

THOMAS GRAHAM
PRESIDENT
COMMISSIONERS OF THE SINKING FUND OF THE CITY OF LOUISVILLE
LOUISVILLE, KY.

Dear Sir:

Re: Why Sixth Fleet Never Needs a Base (BW—Sep. 7, '57, p 142) . . . this is without question the best article that has been written about the Sixth Fleet. . . .

REAR ADM. HUGH C. HAYNSWORTH, JR.
FLEET AND SERVICE SUPPLY OFFICER
U. S. ATLANTIC FLEET
NORFOLK, VA.

Dear Sir:

. . . an excellent, factual article. . . .

REAR ADM. R. J. ARNOLD
CHIEF OF THE BUREAU OF SUPPLIES
AND ACCOUNTS
NAVY DEPT.
WASHINGTON, D. C.



New J-M Imperial Marinite Movable Walls create handsomely designed offices that are easy to dismantle and re-erect.

Imperial Marinite® Movable Walls combine flexibility with dignity and beauty...

New Johns-Manville Imperial Marinite Asbestos Movable Walls create truly distinctive offices for the discriminating business executive.

Imperial Marinite Walls are noncombustible. They are not only easy to dismantle and re-erect, but are also specifically designed to meet the most exacting decorative and architectural standards. The panels are flush and projection-free, come in standardized and interchangeable units to insure maximum flexibility. A different finish or panel arrangement may be used on opposite faces of each partition.

J-M Imperial Marinite Movable Walls are pre-finished in three standard stippled, textured colors: light green, light tan and light gray. Also they are supplied, on order, in stippled solid colors and many other textured colors. This special hard, tough finish

is scratch- and stain-resistant, easy to clean and touch up if damaged. Imperial Marinite Walls are also available in the natural asbestos cement gray finish for field decoration.

Undivided responsibility for a complete job

Imperial Marinite flush or glazed partitions are furnished and erected by the Johns-Manville Construction Department, complete with doors, door hardware, glass and trim.

Johns-Manville Movable Walls are available in several other types to meet varying budget and architectural considerations. For free brochure describing new Imperial Marinite Walls, write Johns-Manville, Dept. BW, Box 158, New York 16, N. Y. In Canada, write 565 Lake Shore Road East, Port Credit, Ontario.



Johns-Manville

Announcing modern, new

'58 FORD HEAVIES

Now, more than ever — America's lowest-priced line of heavy duty trucks! Savings from \$374 to \$867 on most popular models.



Now you can enjoy the benefits of Ford's brand-new, more durable '58 Heavy Duty trucks and save literally hundreds of dollars over comparable models of some other leading makes.

Ford Heavies for '58 offer you not only big savings on initial purchase price, but also important new product developments designed to cut running costs even further. Major changes in engine component construction result in more dependable power, greater economy and better all-around performance.

You get a wider transmission choice featuring the new

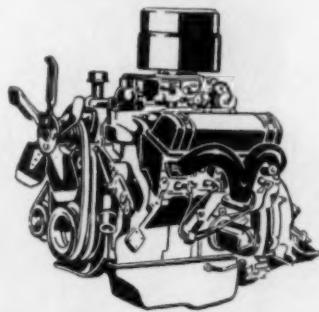
Triple Drive Range Transmatic in Conventional and Tilt Cab models and the 8-speed Roadranger transmission in the larger Conventional, Tilt Cab and Tandem models. All '58 Ford Heavy Duty trucks are loaded with stamina that pays off in lower costs. Feature for feature, they're the most modern big trucks built today!

You save on replacement parts, too! The suggested list prices on Ford parts—especially those "big-dollar" items—usually are considerably less than those of other truck manufacturers. See the typical examples of the savings you'll find on parts for Ford's 332 Heavy Duty V-8 engines in the box below.

**Look at these typical examples of savings
compared with those of another leading truck maker***

TYPICAL "FIRST-COST" SAVINGS		
CONVENTIONAL	TIILT CAB	TANDEM
Ford F-800. \$5,000.00	Ford C-800. \$6,019.00	Ford T-800. \$8,980.00
Truck X.... 5,656.00	Truck X.... 6,886.00	Truck X.... 9,354.00
TYPICAL REPLACEMENT PARTS SAVINGS		
PARTS ITEM	FORD 332 H.D. V-8	COMPETITOR "X" V-8
Short Block Assembly	\$430.00	\$1,140.00
Crankshaft.....	97.00	192.00
Clutch disc.....	22.00	56.00

*Manufacturers' suggested list price, including federal excise tax. Truck prices are with equipment comparable to Ford Standard equipment; destination charges from manufacturers plant and preparation and conditioning charges extra.



NEW MORE DURABLE POWER — Longer-lived, better performing 302 and 332 HD V-8's. New cylinder heads, crankshafts, pistons and valves make these hefty Ford power plants more durable than ever!



'58 FORD TIILT CAB TRUCKS — America's lowest-priced tilt cab line by far! Cab tilts forward in a matter of seconds exposing engine, clutch and transmission for easy inspection and service.

The big fleets buy more Ford Trucks than any other make
FORD TRUCKS COST LESS
 LESS TO OWN . . . LESS TO RUN . . . LAST LONGER, TOO!

A look over the president's shoulder at Townsend



Visitors to our plants often remark that Townsend seems to have changed from its original role as a traditional producer of solid steel rivets and similar fasteners. They ask what is Townsend doing today?

As a matter of fact, Townsend has very definitely changed though it still produces a line of standard fasteners. About ten years ago we realized our product line was too narrow. We decided to do something about it.

A program was developed which called for a broader product mix, new equipment, acquisitions in allied fields, a larger sales force, advanced accounting and scheduling systems, employee training and intensive market research. Development of new cold-forming techniques was included in the plan.

Before going very far afield we decided to get our own house in order. By 1950 we had diversified our product mix, stepped up our sales effort, invested in employee training. High-speed equipment had been added at both New Brighton and Chicago plants. In fact, the capacity in Chicago was doubled and the variety of items produced there increased.

By this time, technical advances we had made in cold-forming greatly broadened our scope—we knew how to produce small precision parts. Then we educated buyers and designers to accept these as superior but less costly than parts produced by other methods. We soon developed an organization with wide technical experience and management knowledge.

We found that some companies in allied fields needed this combination of technical

skills and managerial ability. One of them on the West Coast also had something we wanted—a stake in the aircraft market. So, in 1951 we acquired what is now our Cherry Rivet Division—largest producers of blind rivets for the aircraft industry. After building a new plant at Santa Ana, California and adding new equipment, we augmented the technical staffs and sales force with specialists. Soon we supplemented the product line, improved the blind rivet design and the tools for installing them. Result—gross sales tripled in six years.

Another acquisition followed shortly . . . a company in Plymouth, Michigan, which had developed equipment and techniques to make precision cold-formed parts for the auto industry. Here, too, at the Dunn Steel Division, our investment in talent and equipment soon made it necessary to construct a new plant to care

for the increased business. Sales jumped 250 percent in six years.

Market studies showed we were missing a bet by not being in the Canadian market. We decided to invest in a going concern as a quick cure. So in 1953 we bought an interest in Parmenter & Bulloch Manufacturing Company, Ltd. It is the largest Canadian producer of solid and tubular rivets—also handles the sale of Cherry Rivets and other Townsend products in this increasingly important market.

In 1954 we diversified further by acquiring a firm which designed and manufactured a variety of items for use in automatic weapons systems in military aircraft and armored vehicles. This company became the Armament Components Division at Santa Ana.

By this time we found that portions of our New Brighton plant were obsolete. No adjacent land was available so we purchased 115 acres at Ellwood City, Pa., about ten miles away. Here, in 1955, at a cost of \$1 1/4 million, we completed the first section of a plant which will ultimately house the entire New Brighton operation.

We continually have been aware of the need for expanding research and development facilities and in 1956 acquired controlling interest in Impact Products, Inc. of Orangeville, Ohio. This company has been very successful in developing cold-flowing techniques for forming various alloys and super alloys.

More expansion in the field of research came in 1957 when we acquired G. O. Noville & Associates, Inc. This organization specializes in research in the aircraft, armament, automotive, transportation and electro-mechanical fields.

The change in Townsend Company has had marked results. In 1946 sales were about \$6 million but in the past fiscal year they reached nearly \$17 million. Our master plan of development calls for even greater diversification and a 1962 sales goal of \$30 million.

Now you know how Townsend has changed. Today it is a widely diversified company—with a large fastener division.

Our plans for continued development will be revealed in the next report.

F. R. Dickenson, President

The Technical Authority

Townsend

COMPANY • ESTABLISHED 1816

Sales Offices in Principal Cities

In Canada: Parmenter & Bulloch Manufacturing Company, Ltd., Gananoque, Ontario



Rushing the Rushes to Hollywood

via Air Express with extra-fast door-to-door delivery!

From real-life locations . . . in a ghost town or coastal cafe . . . a producer speeds his exposed film to Hollywood for processing *every day*. Are the "rushes" ready to be exhibited? Or are expensive re-takes to be made? The answers must be known without loss of time — or precious film. Result . . . top producers give four-star rating to Air Express, the *only complete door-to-door air shipping service* to thousands of cities and towns!

If saving time means saving important money in *your* business too, then Air Express is also *your* answer. For Air Express expedites your shipping operations — *safely*. It gives you speed in the air, speed door-to-door, plus a signed receipt at both ends. It gives you *overnight* delivery, with 10,212 daily flights on America's scheduled airlines, 13,500 trucks (many radio controlled), a

nationwide private wire system, a personnel of 42,000. Yet Air Express is inexpensive; for instance, a 15 lb. shipment from Reno to Hollywood costs only \$3.71 with Air Express — \$1.94 *less* than any other complete air shipping method. Explore all the facts. Call Air Express.



GETS THERE FIRST via U. S. SCHEDULED AIRLINES

CALL AIR EXPRESS...division of RAILWAY EXPRESS AGENCY

ACP SALES



**... the part of the ACP team that sets up
and coordinates your ACP service program**

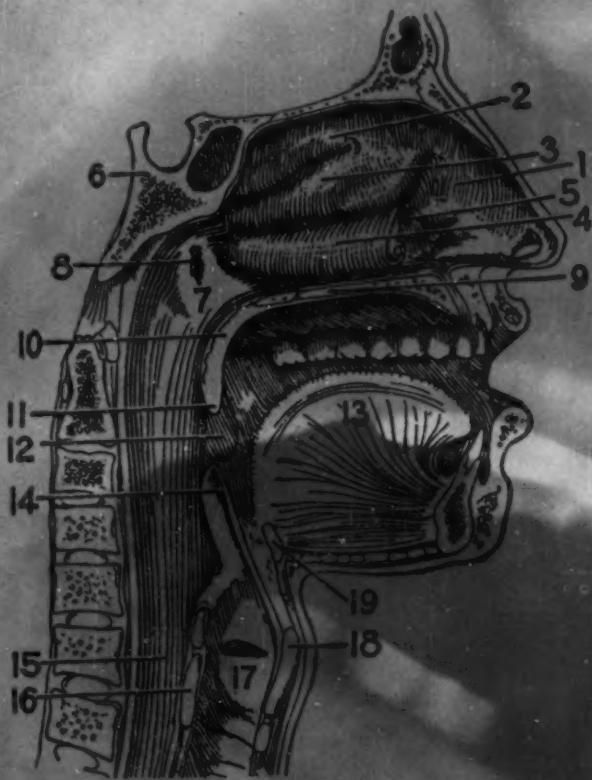
Heading up the operation of the service program in the plant of an ACP chemical process user is the ACP salesman who calls on you regularly. This salesman not only knows the products he sells, but also knows your particular metal treating problems. This familiarity with both companies enables him to set up and coordinate the efforts of any or all parts of the ACP service organization, depending upon your requirements.

Research personnel—or development, technical service, quality control, engineering or sales—will be glad to help you solve problems involving corrosion, paint bonding, forming, drawing, or other metalworking operations. Call on us.

Granodine® for steel • Alodine® for aluminum
Lithoform® for zinc and cadmium surfaces



AMERICAN CHEMICAL PAINT COMPANY, Ambler 37, Pa.
DETROIT, MICH. • ST. JOSEPH, MO. • NILES, CALIF. • WINDSOR, QNT.
New Chemical Horizons for Industry and Agriculture



The voice of authority

Management has two voices. One is the voice of the business-trained executive. The other is the voice of the man of Technical Management. In our technical world, more and more purchasing decisions must be made by scientifically-trained intelligence. That is why, when industry buys, the voice of

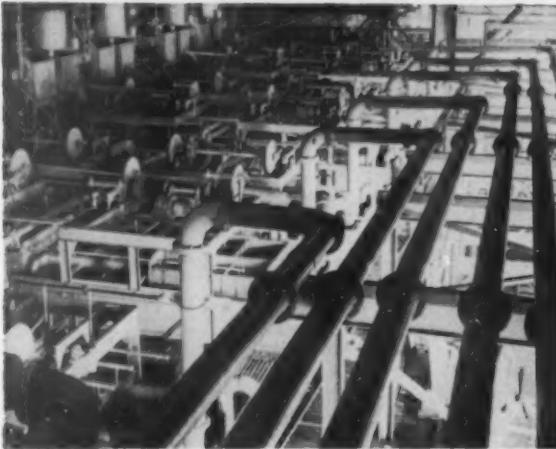
authority is increasingly the voice of the man of Technical Management. He is our subscriber. If you want him to speak for you, speak to him in the pages of the magazine he prizes for its authority in the world and work of engineering and research.

SCIENTIFIC AMERICAN, INC., 415 MADISON AVE., N. Y. 17

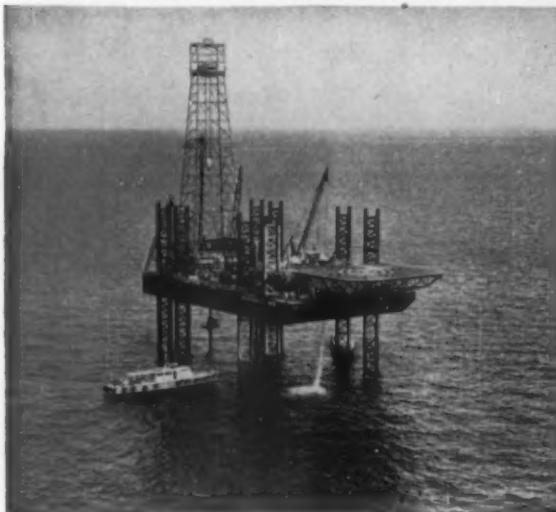
THE MAGAZINE READ BY TECHNICAL MANAGEMENT

**SCIENTIFIC
AMERICAN**

Only STEEL can do so many



STEEL FOR ATOMS. This wilderness of steel is a uranium reduction plant near Moab, Utah. Every inch of the mill is sheathed with steel sheets because they have the strength and durability to keep out the wind and scouring sand. The photograph shows only one cranny of the \$8-million mill—and everything you see is steel, supplied mostly by U. S. Steel's Columbia-Geneva Steel Division.



BARGE ON STILTS DRILLS FOR OIL. This offshore drilling rig measures 200 by 104 feet. It's floated into position, then jacked up off the sea floor. Special steel rings in the footing enable the rigs to withstand winds of hurricane force. It was made by the American Bridge Division of United States Steel.



AT LAST—a good-looking table that can really take a beating. The top is made from softly gleaming USS Stainless Steel . . . hard, scratch-resistant, impervious to heat, easy to clean with a damp rag.



jobs so well



STAMPEDING WILD HORSES! Indian tribes near Warm Springs, Oregon, say that about 1,500 wild horses roam their reservation—and each horse destroys enough range to support five cattle. So, about 20 times each year, the braves round up the horses and stampede them into a camouflaged corral made from USS American Fence. It's the toughest, most durable fence made, and you can buy it from your local dealer.

UNITED STATES STEEL



American Bridge . . . American Steel & Wire and Cyclone Fence . . . Columbia-Geneva Steel
Consolidated Western Steel . . . Gerrard Steel Strapping . . . National Tube . . . Oil Well Supply
Tennessee Coal & Iron . . . United States Steel Homes . . . United States Steel Products
United States Steel Supply . . . Divisions of United States Steel Corporation, Pittsburgh
Union Supply Company - United States Steel Export Company - Universal Atlas Cement Company
USS and American are registered trademarks

7-2458

Watch the United States Steel Hour on TV every other Wednesday (10 p.m. Eastern time).

Do your employees brag about working at your plant?



EMPLOYEES ENJOY topping their friends' bragging about their company's good points . . . like group insurance, for instance. But your people won't rate their group benefits very high unless they know exactly what they're getting.

B. E. U. was developed through research and study by Connecticut General to help you explain your group benefits fully. **B. E. U.** means Better Employee Understanding and when they have it, your employees also worry less. As a result, they can concentrate harder and do better work.

And you *both* get more from your group benefits program.

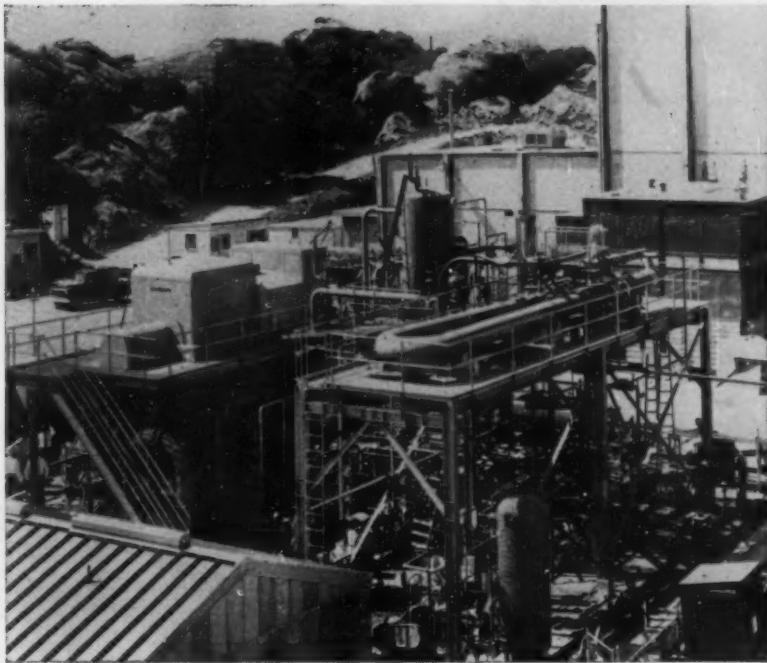
B. E. U. could mean a lot to you *and* to your people. Ask your insurance man about **B. E. U.**, an exclusive service of Connecticut General Life Insurance Company, Hartford 15.

*American Bosch Arma Corporation, Smith-Corona Inc and Trans World Airlines, Inc. all have individually developed plans of Connecticut General group insurance. Take a few profitable minutes to find out about **B. E. U.**.*



CONNECTICUT GENERAL

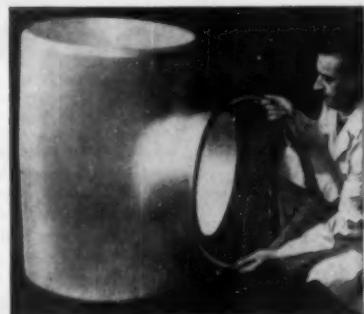
GROUP INSURANCE
PENSION PLANS
HEALTH
ACCIDENT
LIFE



Official U. S. Navy photo
FIRST ATOMIC SUB. TUBE-TURN stainless steel fittings were used in the Nautilus (above) . . . in the Skipjack, fastest sub built to date . . . and the two-reactor Triton, world's largest sub.



PIPING AID. supplied by Tube Turns, includes technical information on a wide variety of subjects to simplify your design work on piping systems.



LARGEST. For the new research reactor at Oak Ridge, Tube Turns produced the largest aluminum pipe fittings ever forged, including 36" reducers and 24" elbows, returns and tees with .562" walls.

First sodium graphite reactor powers utility plant

Because of temperature and corrosion conditions involved, stainless steel piping and butt-welded fittings were specified on the reactor coolant system of the Sodium Reactor Experiment, designed and built for the AEC by Atomics International, a division of North American Aviation, Inc. Reactor heat is used by Southern California Edison Company to produce power. TUBE-TURN® stainless steel welding elbows, tees, reducers and flanges were used at critical points throughout the sodium coolant piping system.

Here is another example of Tube Turns' pioneering work on A-power projects. These plants involve all types of reactors, all phases of the piping, all sizes of piping and types of materials.

When you plan piping and need technical help, take advantage of Tube Turns' broad experience in all fields. Call us! No obligation.

*"TUBE-TURN" and *TT* Reg. U. S. Pat. Off.

TUBE TURNS
 A DIVISION OF NATIONAL CYLINDER GAS COMPANY
 Louisville 1, Kentucky



The Leading Manufacturer of
 Welding Fittings and Flanges



How BAKELITE Plastics do many jobs to **Help communications shrink**

A lot of jack boards in telephone exchanges are molded of phenolic plastic. So are most headsets and the telephones in homes and offices. Outside, wires and cables covered with polyethylene and vinyl plastic keep service going through summer heat and winter storm. Because of this insulation's light weight, longer spans with fewer poles are possible.

DID YOU KNOW:

Printing plates, from which many publications are printed, are made of BAKELITE Plastic, giving fine reproduction at low cost . . . and with considerable savings in shipping weight.





It's easy to get the connection when electronic equipment is built with printed circuits. They make the "wiring" simple and compact, a big help in reducing size. Their base is a laminate of phenolic or epoxy resin. Acid-bath etching and the heat of dip-soldering don't hurt it. Other wiring is insulated and color-coded with polyethylene or vinyl plastic. Radio cabinets and cases are molded from phenolics or colorful styrenes, while phonograph records of vinyl reproduce with superb fidelity and are practically unbreakable.

Communications under the sea travel across the ocean floor through cables insulated with BAKELITE Brand Polyethylene. Moisture penetrating anywhere along the way could wreck transmission. Polyethylene shuts it out completely. Polyethylene's toughness and flexibility also prove valuable properties while ocean cables are being unreeled and laid.

space and time

By wire, through the air, or as the written word, communication today relies heavily on the useful properties of plastics.

As the science of communications grows, it draws society closer together. To perform this mission, it constantly seeks the aid of new materials. And since progress in plastics has matched progress in communications, plastics have become more and more essential to the task.

Plastics have superior insulating properties. Plastics have durability. Plastics can make things lighter, as well as stronger. Plastics have dimensional stability and chemical resistance. Plastics provide color. In fact, there is an almost unlimited variety of useful properties in the hundreds of plastics produced by Bakelite Company, and they are serving practically every industry you can think of.

If your product calls for a plastic, this one convenient source enables you to select from phenolics, vinyls, styrenes, impact styrenes, silicones, epoxies, and polyethylenes. And you can call on 47 years of Bakelite Company experience in the plastics field for guidance in finding the best material for your needs.



Traveling companion to executives, the SoundScriber "200" has an exterior finish that can knock about and still look good. It's an organosol coating based on BAKELITE Vinyl Resin—a tough, heavy-textured coating that gives the case a leathery effect. Textured organosol coatings are being applied to products ranging from automobile dashboards to swivel-chair bases. They're just one of the coatings made from a BAKELITE Resin. Phenolics, styrenes, epoxies, and polyethylenes are also the bases for coatings and finishes of all kinds.

A LEADER IN THE WORLD OF PLASTICS...

BAKELITE
BRAND
PLASTICS

UNION
CARBIDE

BAKELITE COMPANY, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y.

The terms BAKELITE and UNION CARBIDE are registered trade-marks of UCC.



city... 400 miles long !

Millions of people . . . thousands of homes, stores, industries
stretched along the line of the superhighway.

These are the streamlined, super-cities of tomorrow. Some already are
beginning to take shape in the 30 states served by General Telephone.

This new pattern of America's growth must be nourished and
sustained by good communications. We're ready to supply our share.

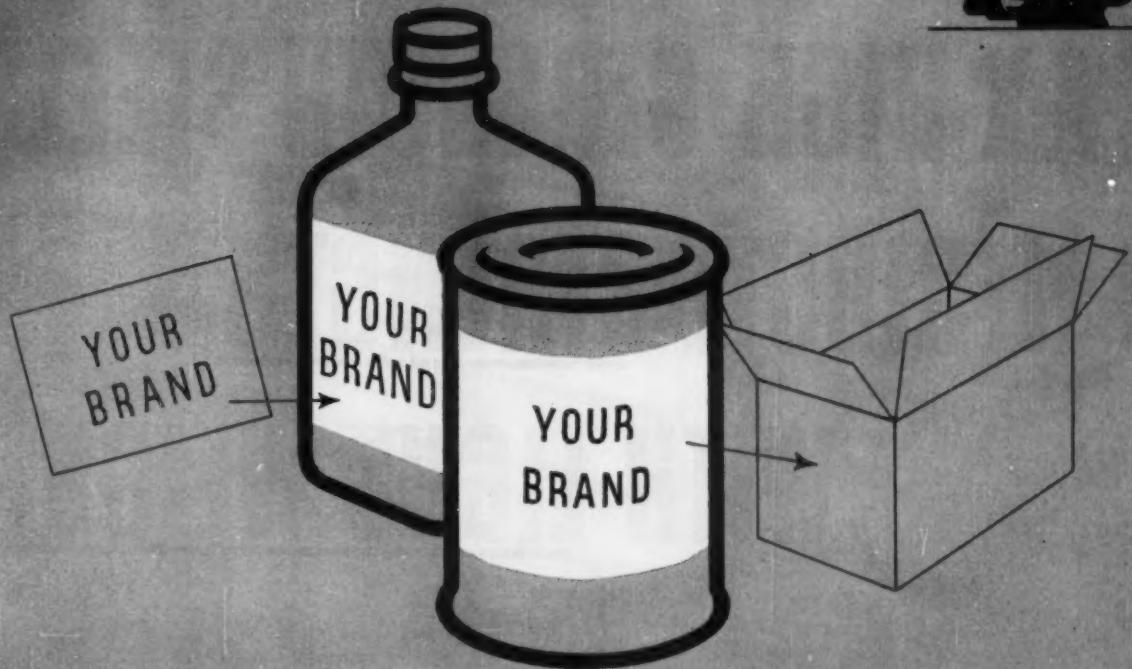


GENERAL TELEPHONE SYSTEM

ONE OF AMERICA'S GREAT COMMUNICATIONS SYSTEMS • 260 MADISON AVENUE, NEW YORK, N. Y.

SPECIFICATION ADHESIVES

play their part all the way



LABEL to CONTAINER to SHIPPING CASE

On the fastest, modern gluing machines . . . on the older types of gluing machines . . . in the various applications of glue by hand . . . whatever the speed, the room temperature or humidity, the size or shape of the container or shipping case . . .

The chances are—you'll find ARABOL Specification Adhesives playing their inconspicuous, but vitally important part. Out of 72 years of pioneering in the making of adhesives, it is our privilege to serve America's leading manufacturers in their multi-billion dollar operations of labeling and case-sealing their wares.

Out of this long and varied experience, we operate in the belief that—for each adhesive application in your business—

there is some one adhesives formula that can serve you best.

That is the significance of "ARABOL Specification Adhesives." At little or no extra cost, you can have your adhesives specification-formulated to meet the particular conditions of your manufacturing, packaging, labeling, shipping and storage operations. We would like to submit samples of

specification-formulated adhesives for you to test in your own plant—under your particular working conditions—until you find the formula that best meets each of your requirements. That is the one kind of testing that assures you of continuously satisfactory results.

May we send you a folder, "How To Buy Adhesives," listing 23 basic yardsticks that let you know when you have the right adhesives? Kindly address your inquiry to Department 72.

THE ARABOL MFG. CO.

... a nationwide organization
serving major users of industrial adhesives

EXECUTIVE OFFICES:

110 East 42nd Street, New York 17, N.Y.

CHICAGO • SAN FRANCISCO • LOS ANGELES
ST. LOUIS • ATLANTA • PHILADELPHIA • BOSTON
PORTLAND, Ore. • ITASCA and McALLEN, Tex.
CINCINNATI • DENVER • TAMPA • LONDON, Eng.



72 YEARS OF
PIONEERING IN THE
MAKING OF ADHESIVES

For whatever you make . . .

N-A-X[®] HIGH-STRENGTH STEELS CONTRIBUTE STRENGTH WITH LIGHT WEIGHT



N-A-X Alloy Division, Dept. BW-10
GREAT LAKES STEEL CORPORATION
Detroit 29, Michigan • Division of

NATIONAL STEEL CORPORATION

N-A-X Alloy Div., Dept. BW-10,
Great Lakes Steel Corp., Detroit 29, Mich.

- Please send me 8-page illustrated technical catalog on
N-A-X HIGH-STRENGTH steels.
- Please have your representative contact me.

Name _____ Title _____

Company _____

Street _____

City _____ Zone _____ State _____

Hamlin—the versatile knock-down, pallet-type steel shop and shipping boxes built by Hamlin Metal Products Corp., Akron, Ohio—make still another profitable example of the adaptability of N-A-X HIGH-STRENGTH steels.

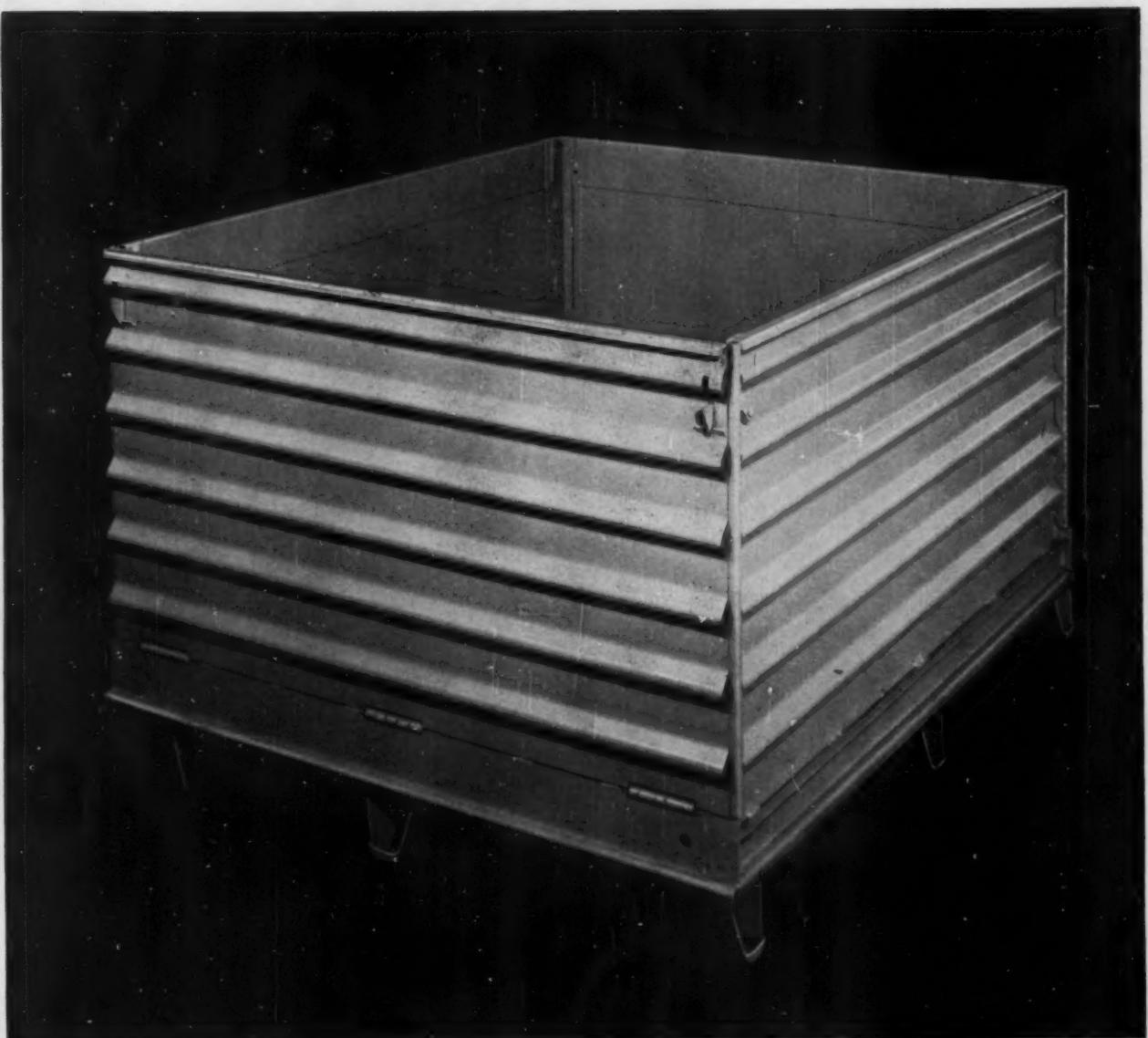
Developed in answer to Hamlin's own shop problems, *Hamlin* quickly proved themselves in the nation's leading automobile, aircraft and appliance manufacturing plants. On the job *Hamlin* must have strength to carry heavy fabricated parts and still be light enough for fast, easy plant handling and minimum return freight costs.

Like so many producers, Hamlin looked for and found these characteristics of strength with lightness in N-A-X HIGH-STRENGTH steels, along with other significant benefits.

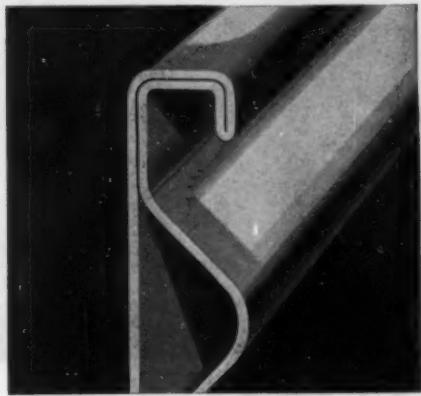
Check These Important Advantages for Your Job: N-A-X HIGH-STRENGTH steels—both N-A-X HIGH-TENSILE and N-A-X FINEGRAIN—compared with carbon steel, are 50% stronger . . . have high fatigue life with great toughness . . . are cold formed readily into difficult stampings . . . are stable against aging . . . have greater resistance to abrasion . . . are readily welded by any process . . . offer greater paint adhesion . . . polish to a high luster at minimum cost.

Although N-A-X FINEGRAIN's resistance to normal atmospheric corrosion is twice that of carbon steel, N-A-X HIGH-TENSILE is recommended where resistance to extreme atmospheric corrosion is important.

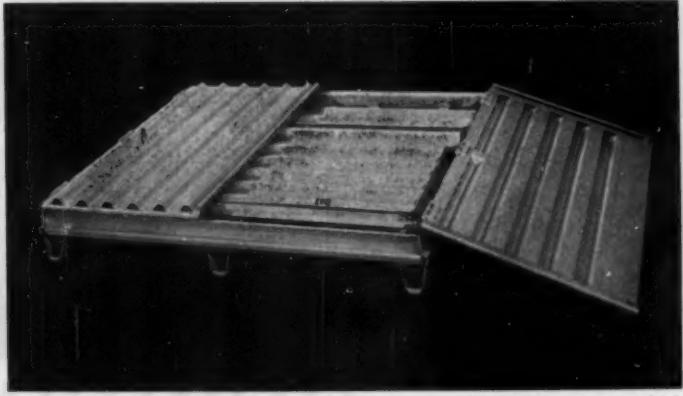
For whatever you make, from steel boxes to boxcars, with N-A-X HIGH-STRENGTH steels you can design longer life, and/or less weight and economy into your products. Let us show you how.



Hamlinainers are the result of more than five years of intensive research, development and practical on-the-job testing. Thanks to N-A-X HIGH-STRENGTH steels, Hamlinainers are tight enough to hold rivets, strong enough to carry forgings and light enough for moving by any standard plant fork-lift truck.



The great formability of N-A-X HIGH-STRENGTH steels makes this design easy to produce. Rounded edges add strength, safety.



In less than 20 seconds, one worker can set up a Hamlainer, or fold it flat for easy stacking when not in use. This important benefit continues to win new friends for Hamlinainers with manufacturers.



“can we afford to modernize?”

“it's cheaper than production losses!”

“it's the economical way to grow!”

so they began a step by step program to...

POWER-UP!

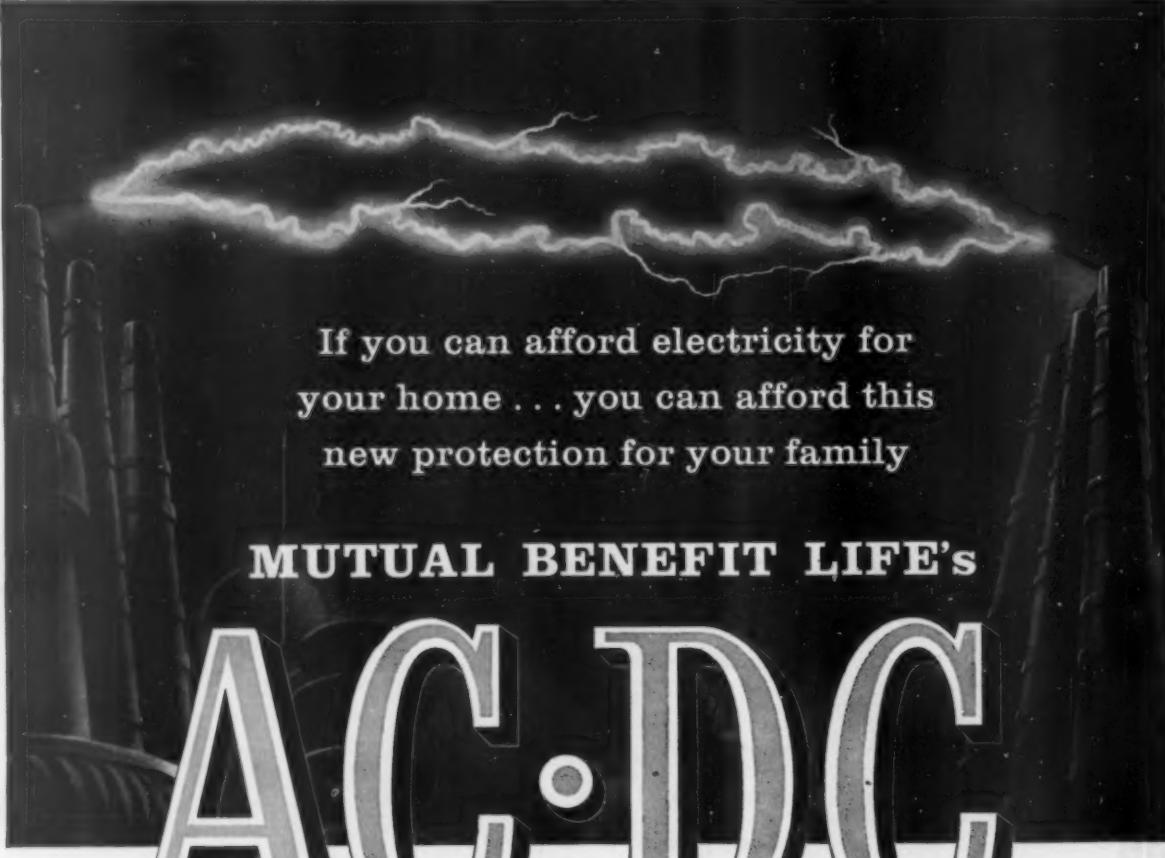
... and what does it look like now?

CRANE CO. did . . . and gained greater production capacity from the same space. Vitally aware of the need to keep ahead of growing markets, Crane Co. examined searchingly, and logically, one factor on which high production depends: adequate distribution of electric power. Result: an unwieldy, inflexible system is now being replaced with modern electrical distribution equipment . . . safe, enclosed switchgear and circuit breakers—feeder and plug-in bus duct to carry plenty of power to all areas—tie breakers to isolate circuits in trouble. Line losses are minimized, and new production space is made available by the compactness of the equipment.

Ask your electric utility sales engineer or your Westinghouse representative how you can Power-Up . . . to get better production and profit from your electrical dollar.

A PROGRAM OF ELECTRICAL SERVICE SPONSORED BY

WESTINGHOUSE ELECTRIC CORPORATION



If you can afford electricity for
your home . . . you can afford this
new protection for your family

MUTUAL BENEFIT LIFE's

AC-DC

added coverage . decreased cost
LIFE INSURANCE

One of America's most respected life insurance companies announces the dynamic result of its long experience as a pioneering leader in the field.

AC-DC is a unique concept in life insurance planning. It assures greatly increased value for every premium dollar—with the *most liberalized coverage and most complete protection* in Mutual Benefit Life history.

Your Mutual Benefit Life policy is custom-fitted to your family's

present and future budget needs. And as the size of the policy increases, it costs less per dollar of coverage—coverage that gives greater benefits than ever before.

Your Mutual Benefit Life man can prove to you quickly and simply what AC-DC's economy and protection advantages can mean to you and your family. He will be happy to see you at your convenience and with no obligation on your part. You'll consider his visit well worth your while.



NEW,
SIMPLIFIED
BOOKLET POLICY
most understandable ever written . . .
containing new liberalized provisions—makes your insurance policy as easy to read as this magazine!
Even includes a table of contents for quick reference.

MUTUAL BENEFIT LIFE

The Insurance Company for TRUE SECURITY

THE MUTUAL BENEFIT LIFE INSURANCE COMPANY, NEWARK, NEW JERSEY



Construction of Every Type:
Marine, Heavy, Highway, Chemical,
Industrial, Building

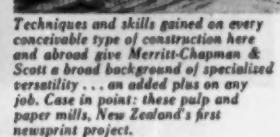
Industrial Plants, Bridges, Tunnels,
Steel Mills, Housing Developments,
Paper Mills, Highways, Chemical Plants,
Piers, Bulkheads, Commercial Buildings,
Hospitals, Schools, Utilities, Airfields &
Air Base Facilities, Pipelines, Dry Docks,
Shipways, Sewage Works, Dams,
Hydroelectric Plants, Marine Oil
Terminals, Bulk Fuel Storage Facilities,
Hotels, Dredging

Marine Salvage

Derrick Heavy Hoist

Inland Salvage

THIS TOO IS MERRITT-CHAPMAN & SCOTT



Techniques and skills gained on every conceivable type of construction here and abroad give Merritt-Chapman & Scott a broad background of specialized versatility... an added plus on any job. Case in point: these pulp and paper mills, New Zealand's first newsprint project.



Extensive work for the Nation's accelerated highway program is one of Merritt's many roles in advancing our economic frontiers. This section of the New Jersey Turnpike is typical of six major road building projects recently entrusted to M-C & S.



Merritt's diverse skills are playing an important part in the construction of the vital St. Lawrence Seaway and Power development. Seven projects, including this closure dike and lock at Cornwall, Ontario, have already been awarded to M-C & S.

CONSTRUCTION DEPARTMENT

NEW YORK, NEW YORK

"You Name It... We Build It"

INDUSTRIES
OF
MERRITT

CHEMICAL PAINT AND
METALLURGICAL DEPARTMENT
DIXIE & RAYHOLD CO., INC.
TENNESSEE PRODUCTS
& CHEMICAL CORP.

CONSTRUCTION
DEPARTMENT
CONSTRUCTION
OF EVERY TYPE

DRILLING
DEPARTMENT
NEW YORK
DRILLING CO., INC.

TRAILER
DEPARTMENT
MILITARY TRAILER CO.,
INC.

WELDING STEEL
DEPARTMENT
WELTON STEEL
CORPORATION



YOUR CONFIDENCE IS JUSTIFIED WHERE THIS FLAG FLIES

**MERRITT-CHAPMAN
& SCOTT**

CORPORATION

FOUNDED IN 1880

281 MADISON AVENUE • NEW YORK 16, N.Y.



HOW

HERCULES

HELPS...

WITH PENTAERYTHRITOL. Outstanding resistance to heat, to light, and to moisture have made PE-based alkyd resins the preferred approach to many of the newest developments in surface coatings. Other applications for this new chemical—in such things as vinyl plastics, fire-retardant paints, and floor coverings—are growing rapidly. The demand for PE has skyrocketed. And Hercules, with a new Midwest producing plant, is assuring ample room for even further product developments.

WITH PLASTICS. The first commercial plant utilizing the famed Ziegler process is now on stream in Parlin, N. J. producing Hi-fax®. This completely new Hercules ethylene polymer offers a combination of characteristics never before available in any plastic. The panel board below displays some of the superior housewares made with Hi-fax. Providing many advantages over conventional polyethylene, Hi-fax is already finding other applications in a wide variety of products.



HERCULES

HERCULES POWDER COMPANY

INCORPORATED
900 Market St., Wilmington 99, Del. Sales Offices in Principal Cities

CHEMICAL MATERIALS FOR INDUSTRY



057-8

BUSINESS OUTLOOK

BUSINESS WEEK

NOV. 2, 1957



November begins to look more and more like a key month. Between now and Thanksgiving, we'll get new light on several aspects of business:

- New autos will give a clue to how consumers feel about spending on big-ticket items (which often require borrowing as well as cash).
- Employment in aircraft and ordnance plants should be stabilized, or at least the rate of layoffs should slow. That will come from clarification of this week's somewhat murky pronouncements on contracts and payments.
- Public works programs' size and shape will be decided to a considerable extent by Tuesday's state and local elections.

Expenditures on state and local works are taking on new importance as a business stabilizer, what with the efforts at federal economy and the growing caution of industry on plant-and-equipment outlays.

But if the 48 states and 100,000-odd local divisions are to spend more money, they have to raise it first. This adds interest to next week's balloting, in which the fate of nearly \$600-million of new bonds is at stake.

Any easing in interest rates will, of course, lighten the load on all public works borrowers. But, even without that, there are \$475-million of municipal bonds on the calendar for bids in the next 30 days.

It is true, nevertheless, that new bond authorizations for the year to date are running appreciably behind 1956 (and there even is a small lag compared with 1955's figures).

One reason for the shortfall, of course, is the disappearance of toll-road issues that padded earlier years' totals.

Here's a measure of the importance of local government's contribution to business activity: State and municipal spending this year apparently is going to run \$36-billion—and you can project it at a \$40-billion rate for next year barring setbacks to tax income and borrowing plans.

Such a gain, quite obviously, would go a long way toward making up for the slippage in other quarters.

State and local governments now are employing directly about 5 1/4-million workers. This involves a payroll of some \$20-billion.

Capital expenditures—on such things as schools, highways, and sewer and water systems—require another \$12-billion.

Looming large, both in payroll and investment, is education; school districts now are spending about \$14-billion a year (while, at the same time, the school population is rising by about 1.6-million a year).

There now are about 41-million students in the nation's schools—two students for every three persons in the working population, roughly.

Within the next few days, everyone will have had a look at just about all the new automobiles there are going to be to see. Then comes the test—not just of public preference but also of the market's size.

And output, as you might expect, is pushing up rapidly.

Last week the auto plants turned out an estimated 103,000 cars. That isn't large, of course, relative to what they'll be doing in a few weeks. Yet the 40% jump over the week before was good for this time of year—

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
NOV. 2, 1957

when "bugs" have to be got out of cars and kinks out of production lines—and it was the biggest week in the last two months.

Now, if ever, must come the improvement in demand for the metals.

We've been waiting for the auto manufacturers to begin to get up a good head of steam, and that time now is at hand.

Could this be why copper prices perked up a bit in London this week? And would it explain a slightly better level of orders at home?

Old-timers aren't fully convinced; they'll watch it another few days.

Aluminum began to feel the slump in demand a long while after copper and, so far at least, has reported no signs of recovery.

In fact, with output no better than 80% of capacity, producers of the light metal are concentrating on selling new users while casting a somewhat fishy eye over programs for further expansion.

Aluminium, Ltd., Canada's big factor in the world market, has shelved plans for 80,000 additional tons of capacity next year. And Alcoa is considering a second stretchout on 150,000 tons for Warwick, Ind.

This Aluminium postponement, is a \$30-million item for 1958.

Trends in the labor force are becoming a little disquieting.

Not only did September fail to usher in the autumn employment upturn. The same also was true for October.

In fact, it seems fairly certain that unemployment is rising. And this may be one of those rare years (1953 was the most recent) in which factory employment in October fails to top September.

The number of laid-off workers drawing unemployment compensation has been rising in recent weeks and now stands at nearly 1.3-million. Last year at this time, the number was declining.

Thus, where the compensated unemployed earlier this year were averaging only about 100,000 over 1956, they now are 350,000 above.

Figures from any other year are likely to look a little undernourished when held up against October-November-December of 1956, because that was the bounciest period of the boom.

It must be noted, however, that manufacturing employment began showing signs of sluggishness even before this latest lag.

Employment in metalworking lines, notably machinery, was posting good year-to-year gains early in 1957. But by midsummer, these had begun to disappear. From midsummer on, they were replaced by steadily increasing losses.

Domestic business now is feeling the troubles that beset foreign customers, notably the shortage of dollars to pay for goods here.

Our exports in September were little better than last year. Earlier months had been posting gains of 20% and more.

Our imports have slid a bit, too, which makes dollars scarcer than ever abroad. And the surplus of ship bottoms worsens apace.

Contents copyrighted under the general copyright on the Nov. 2, 1957, issue—Business Week, 330 W. 42nd St., New York, N. Y.

DE LAVAL

MAIN PROPULSION UNITS

... go to sea
under these flags



Cities Service Company,
Incorporated

GRACE

Grace Line Inc.

P

Pittsburgh Steamship
Division



Socony Mobil Oil Company,
Inc.



The Texas Company

ESSO

Esso Shipping Company



The Cleveland-Cliffs
Iron Company



The Interlake Steamship
Company



United Fruit
Company

L

Lykes Bros. Steamship
Co., Inc.

A

American Steamship Co.,
Boland and Cornelius, Managers



United States Navy

S

Sinclair Refining Company



United States Lines
Company

REISS

The Reiss Steamship
Company



United States Coast Guard

AMOCO

American Oil Company



Waterman Steamship
Corporation

CG

Great Lakes Steamship
Company, Inc.



DE LAVAL Marine Division

DE LAVAL STEAM TURBINE COMPANY

Trenton 2, New Jersey



Solution to ancient puzzle

For centuries the Chinese have carved these pieces of wood or ivory to be fitted together in various forms. Assembling a figure like the one shown here, from scattered pieces, is enough to perplex the most logical mind. Even more complex is the problem facing industry and business today in data processing and information handling.

In selecting electronic or magnetic equipment for your particular needs, consider applicability of proved equipment, availability of advanced designs, and cost . . . **ALWAYS CONSIDER ALWAC.**



13040 So. Cerise Avenue, Hawthorne, California
Coliseum Bldg., 10 Columbus Circle, New York



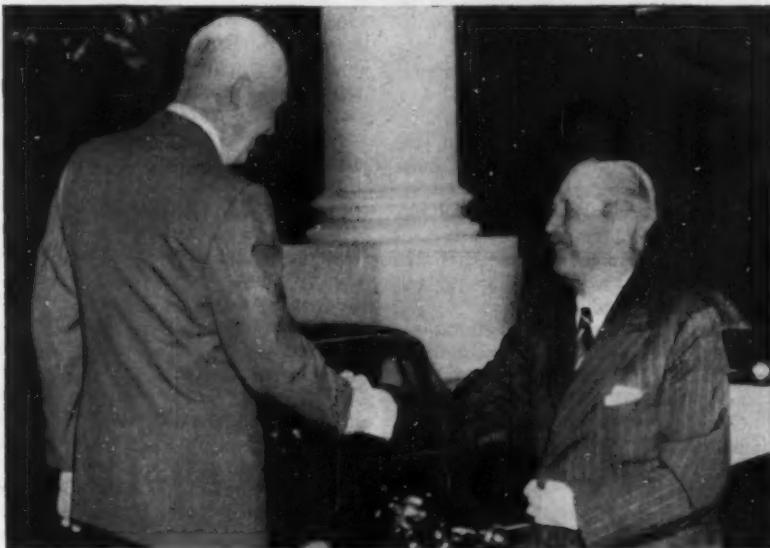
Sales and service in major cities throughout the U.S., in Canada and Europe



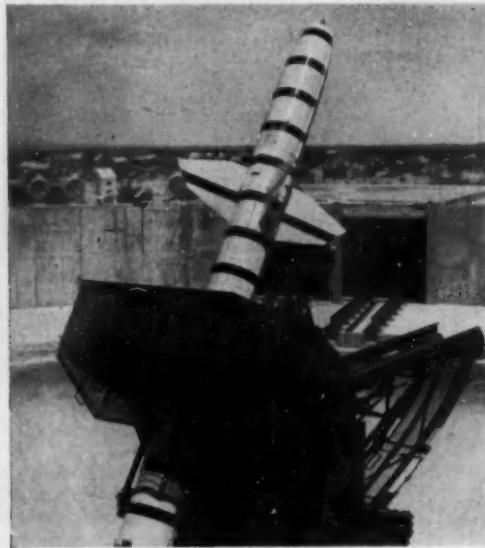
DESIGNERS AND MANUFACTURERS OF DATA PROCESSING SYSTEMS

NOVEMBER 2, 1957

NUMBER 1470



MACMILLAN, British prime minister, gets welcome at White House for defense talks.



TALOS defense system is shown off . . .

Rising Uneasiness Brings New White House Mood

The Administration, with Pres. Eisenhower very much in the forefront, is undertaking a massive campaign of reassurance. The goal: to shore up public confidence in the domestic economy and in our military strength in a world of Russian-promoted tensions.

This week brought solid evidence that Eisenhower and the men around him are concerned over events of recent weeks.

• **The Mood Changes**—The capital is undergoing a perceptible change of mood. In large part it can be attributed to the fierce debate that was touched off when the Russians launched their globe-circling Sputnik a month ago.

Some of the signs:

- Eisenhower's own decision to go to the people with a series of speeches that, he hopes, will eradicate what he calls "morbid pessimism" about the business future at home and the maintenance of world peace.

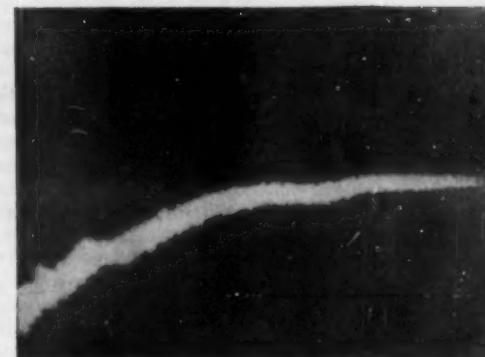
- An abrupt turnaround in Pentagon policy on disclosures about the state of our missile art. For the first time, the public is being told officially where we stand in development and testing (pictures).

- Well-publicized moves by new Defense Secy. Neil H. McElroy to revoke some of the controversial economy orders of his just-departed predecessor, Charles E. Wilson (page 154).

- The President's manifest personal interest—even to the point of scheduling a trip to Paris in December—in strengthening the military power of the North Atlantic Treaty Organization collectively and our allies individually. His White House conference with British Prime Minister Harold Macmillan (picture, above) touched on this point.

- And, finally, an unprecedented turnout of high Administration officials at last week's meeting of the Business Advisory Council, the blue-chip industrialists and businessmen who meet regularly to swap views with government representatives on current and future problems.

- **Public Defense**—To most perceptive Washington observers, these things add up to a decision to defend vigorously and publicly the Administration's past conduct. They don't signify any dramatic policy shift, however. There is yet no sign of any big new stepup in



THOR, Air Force IRBM, is shot off . . .



FAR SIDE rocket is fired from balloon.



JUPITER, Army IRBM, gets a test.

military spending—no crash program for rockets and missiles patterned on the Manhattan District that produced the World War II atom bomb.

I. The Presidency

Eisenhower has lately had some extremely busy days. Aside from his rigorous three days of conference last week with Prime Minister Macmillan, he has been personally seeing more of the government's scientific advisers than ever before. Heretofore, these men have gone to the White House mainly to deliver reports to Presidential subordinates, for channeling upward through the chain of command.

• **Sharper Interest**—The President's critics—those who have complained that he is inattentive or indifferent—detect what they think is a quickening interest in personal leadership.

One example is the President's plan for a series of four to six public speeches.

"The President and all of us have been aware of the criticism that's going around," says a high official. "The plan for a series of speeches has been discussed for some time. But actually it was the President himself who decided that they need to be made now."

• **Reassurance**—White House staffers cringe a little at use of the word "reassurance" to describe Eisenhower's intended theme, particularly as it relates to the domestic economy. Nevertheless, they do not dispute that reassurance will be the Chief Executive's aim.

The same need for reassurance exists in the overseas alliance. Eisenhower will go to Paris for a NATO meeting in December, personally to counteract allied fears of Soviet technical supremacy and to discuss pooling of free world resources to cope with the Russians.

This week, Eisenhower put Defense Secy. McElroy and Chmn. Lewis Strauss of the Atomic Energy Commission to work on details for cooperation between the U.S. and Britain on atomic

arms development. This is an outgrowth of his sessions with Macmillan. The idea is to reduce expensive duplication in arms. An even bigger result of the Eisenhower-Macmillan conference, however, according to one official, was generation of "a new spirit of closer collaboration"—and repair of the damage that occurred in the 1956 crisis over Suez.

II. The Pentagon

Nowhere are the changes in the White House mood reflected more brightly than in the Pentagon.

On successive days this week, McElroy made front-page news with steps intended to spike charges that the Administration is more interested in economy than military power.

First, he revoked the two-month-old order that cut \$170-million out of research and development spending this year (page 154).

Second, he relaxed the Pentagon's tight budget restrictions to boost the \$19-billion expenditures ceiling for July-December by \$400-million. It was the first official acknowledgment that the \$38-billion goal for the 1957-58 fiscal year will not be met, although McElroy says he still shoots for a January-June goal of \$19-billion.

• **Highest View**—McElroy's moves, the press was painstakingly told, were authorized "by higher authority"—obviously the President himself, who told his midweek news conference that he never considered the \$38-billion limit to be sacrosanct. However, Eisenhower linked the extra \$400-million to price increases—not new programs—and implied that the increase was all right with him since it would not pierce the debt ceiling (page 46).

Pentagon sources say the decision will ease somewhat the plight of aircraft makers and other big defense contractors pinched recently by an Air Force order withholding portions of monthly progress payments as a means of staying inside the expenditure ceiling (BW-Oct. 26 '57, p43). Contractors will now be able to pass on to the government at least some, if not all, of the interest costs incurred by sticking to current production schedules while receiving smaller government payments.

Probably more reassuring to the general public—intended to be so, at least—is the series of official announcements coming out of the Pentagon for the first time about missiles. They have included reports of success with:

• **Firings** of two intermediate-range ballistic missiles—the Air Force's Thor, the Army's Jupiter (pictures).

• **Launching** of a research rocket from a balloon platform to a record altitude of at least 4,000 miles, in the

Air Force's Operation Far Side (picture, page 39).

• The "first flight test" of the new first-stage rocket that will be used to launch the Navy's Vanguard earth satellite.

There were other Pentagon-cleared items in the same soothing tenor. Lt. Gen. Stanley R. Mickelson of the Army Air Defense Command declared confidently in a speech that bore Defense Dept. clearance, that the Army's anti-aircraft missile, the Nike Zeus, "will evolve into an effective anti-missile missile."

III. Whither Business?

In the memory of veteran observers, there has never been a meeting of the Business Advisory Council so well-attended by top-drawer Administration officials as the recent one at Hot Springs, Va.

From the White House, there were Presidential Asst. Sherman Adams, Robert Cutler, Eisenhower's chief aide on security matters, and Gen. Wilton Persons, the President's chief aide on legislative affairs. They showed up unexpectedly, as did McElroy of Defense.

Also on hand, although scheduled in advance, were Vice-Pres. Richard M. Nixon, Raymond J. Saulnier, chief of the Council of Economic Advisers, and the Deputy Undersecy. of State, Robert Murphy.

• **Exchange of Confidence**—They went to give the BAC some reassurances—the U.S. is militarily stronger than Russia, Soviet technical gains have not caught us napping, there is awareness of the fact that the domestic economy is flattening out, and it is being watched.

In return, the Administration delegation got some reassurances. What the BAC members told them, in summary, amounts to this:

• True, business is leveling off and may even be in for a downturn, but the business community is not panicky and sees no depression or serious recession.

• A tax cut next year would be nice, but big business doubts that one can be justified.

• Resentment against the Administration about such matters as tight credit controls is minor.

Thus, in effect, this forum of big business and big government turned out to be one of mutual reassurance. In the afterglow, Eisenhower stood before his news conference this week and talked in relaxed manner about business.

We're taking a breather after a long upsurge, the President acknowledged, but newsmen saw no evidence that he thinks the time is ripe for government to provide new business momentum by a turnaround in basic economic policy.

Shefferman's 400 Clients

Senate probers charge "union-busting" tactics in activities of consultant firm hired by managements; many companies on list retort it wasn't hired for "labor matters."

The Senate committee probing into the activities of Nathan Shefferman, a labor relations consultant, threw its spotlight on a long list of Shefferman's management clients last week. The committee chairman, Sen. John L. McClellan (D-Ark.), said bluntly that in the coming weeks "what appear to be numerous questionable activities . . . will be explored in detail."

Even though McClellan emphasized that not all management contacts with the Shefferman firm, Labor Relations Associates, Inc., were of "an improper, illegal, or questionable nature," employers who have dealt with Shefferman since the mid-1940s squirmed uncomfortably.

Testimony in the early Shefferman hearings caused their discomfort. Witnesses' descriptions of LRA activities in connection with Morton Frozen Foods, Inc., Whirlpool Corp., and Sears, Roebuck & Co. led to sharply worded comments by McClellan—and a widespread belief that Shefferman's specialty is to keep out unions or to assure employers of a "soft" union.

• **Methods**—Witnesses before the Senate committee and the group's staff investigators say the Shefferman techniques fall into a general pattern of "employee committees" organized to combat unions, "spy" activities to spot—and get rid of—pro-union employees, "sweetheart" contracts to keep strong unions out, and other devices.

Additionally, according to investigators, Shefferman and his associates have an acute awareness of the full lengths employers can go within the framework of the Taft-Hartley Act.

McClellan, with a gesture of disgust, described Shefferman's activities, mostly with clients in the retail trades, as "payoffs and shakedowns" in behalf of employers. Committee Counsel Robert Kennedy characterized the Shefferman firm as a "union-busting outfit."

Some employers involved made quick and firm denials of anti-union activities. And, nationally, hundreds of others on the clients list released by the Senate committee reviewed their own dealings with Shefferman or his agents.

• **Types of Dealings**—These dealings took many forms, some apparently innocent and some not, others in a broad twilight zone. Committee investigators so far have probed about 50 of the more than 400 clients served by Labor Relations Associates. Their notes reportedly

show signs that these clients hired Shefferman primarily to keep unions off the premises. Of the 50 companies, 85% are non-union.

The reports also show that just about all of the 50 companies investigated used one or more of what seem to be familiar anti-union practices.

The initial probing of Shefferman clients covered only those paying LRA the highest fees. In time, the others will probably get attention.

The concentration is in the retail and wholesale trades, where management is—and has long been—concerned about the possibility and implications of broader unionization. Only about 500,000, or roughly 5% of an estimated 10.8-million wage and salary employees in the industry, are union members.

• **Sampling**—This midweek, as employers across the country ticked off what Shefferman or his associates had done for them, BUSINESS WEEK reporters took a sampling of LRA relations with clients.

Many employers answered questions about what they hired Shefferman for and what services they received from him with a terse "no comment." Others expressed surprise that they had been listed as clients.

Many said they had retained Shefferman for specific advisory services not concerned with unions, had got advice, had paid substantially for it, and had not had any further dealings with LRA. Several said, in fact, that they had found they couldn't afford to.

In many instances, reporters couldn't escape a feeling that they weren't being told the full story of what employers expected and got from the Shefferman firm. In others, however, the disclaimers had a ring of sincerity.

• **Surprise**—Among companies expressing surprise and concern about being listed as Shefferman clients was Wohl Shoe Co., St. Louis, which said its only contact with LRA was an agreement to pay a pro rata share of a Shefferman fee for representing an Oklahoma City retailers group.

A chain store with headquarters in Detroit and a large Detroit clothing store said they had never had any Shefferman dealings. A Detroit's men's clothing store said, however, that on one occasion all such stores in the city had hired LRA to bargain with unionized tailors.

• **Group Action**—The group pattern

was found by BUSINESS WEEK in several cities with a heavy concentration of retail business. In Toledo, Retail Associates, Inc., representing four downtown department stores, retained Shefferman in 1952, after a clerks' strike, for labor relations advice, and insists "it was all quite aboveboard." The Retail Clerks' International Union in Toledo agrees. Houston merchants called Shefferman in the early 1950s.

• **One-Shot Deals**—Not all contacts were through associations, and many were temporary. Kleinhans Co. in Buffalo retained LRA during an organizing drive among its tailors, for labor advice (which a spokesman says "wasn't much good"). A Buffalo department store, Sattler's, used Shefferman for a time on personnel training and aptitude testing—and was "unimpressed." Pizitz, in Birmingham, however, found Shefferman's advice to supervisors on treatment of employees "very helpful."

Knox Corp., in Georgia, hired the Shefferman firm to "organize a personnel department"—a three-month job. American Express Co. retained Shefferman for a "supervisory training program."

• **How They Started**—So the reports go, generally indicating that in some instances Shefferman or associates got clients through a bang-up sales job, in others were called in—usually, clients told BUSINESS WEEK, because Shefferman was recommended by some other company or through an association.

In Chicago, BUSINESS WEEK reporters found that "a lot of firms listed as Shefferman clients in Illinois are covered by contracts between their home offices elsewhere" and LRA.

Many companies aren't happy about the relationship. As one employer put it, "we didn't hire Shefferman for union-busting activities. We had a single management problem, supervisory training. Now, we're not so damn proud of having hired Shefferman."

• **Union Matters**—Many companies listed personnel research and training, rather than "labor matters" as the reason for their dealings with LRA. One Chicago firm did admit LRA "helped us vote a union down," but denied any illegal practices.

Other companies, mostly small ones without labor relations specialists, also admitted getting Shefferman to help in "legal campaigns" against unions.

• **LRA's Answer**—Labor Relations Associates, in Chicago, had about the same thing to say as its employer-clients. It "likes" to keep operations strictly within Taft-Hartley provisions, a spokesman said, but its field staff have a free hand and "sometimes go awry."



CHEVROLET introduces sporty new Impala hardtop and convertible above as top line.



FORD is changed more than usual for an



NEW Chevy has triple tail lights . . .



. . . dual headlights, dual signal lights . . .



. . . sports-car-type raked steering post and a hideaway bag for rubbish.



Lined Up

The cars lined up above are in the starting blocks for what promises to be the greatest race Detroit has ever staged. It will be Ford vs. Chevrolet for the No. 1 sales position, Plymouth in its private duel with Buick for the No. 3 spot.

In a broader view, the stake is the future standing of two of the country's largest industrial corporations: Ford Motor Co. and General Motors Corp. While these two companies have long fought for sales supremacy in the so-called low-price field, there are reasons why their rivalry this year is keener than ever before:

- For the first time since 1935, Ford appears to be No. 1 in registrations for the year.

- For the first time ever, Ford, with its new Edsel, has a full line of cars (BW-Jun.22'57,p45) to match GM at every price level.

- Family Fight—Outsiders may figure it doesn't matter much whether Ford or Chevrolet ranks first in registrations by a small margin (Ford leads at the moment by 50,000 or so). But neither company regards it as trivial.

For one thing, there's a big difference between being able to advertise—as GM has for 22 years—"More people buy Chevrolets than any other car" and not being able to.



off year: new engine, new transmission, new look.



PLYMOUTH, after big sales year, found less need to change than the other two.

for the '58 Auto Sales Race

But still more important is the effect of one car's sales leadership on the rest of its family. Auto people firmly believe that car buyers trade up in the same family of nameplates—a Chevy owner moves up to Pontiac or Oldsmobile, a Ford owner to Mercury, and so on. Since Ford lost the No. 1 sales spot in 1936, there have always been more Chevrolet owners than Ford owners. But if Ford can upset Chevy two years in a row, Ford Motor Co. as a family of cars would get a big lift.

• **Figure Jigger**—In order to rely on an outside source of data, Detroit determines sales position not by how many cars the factories say they deliver but by how many applications are made to license new cars in the various states. Registration figures are tabulated by R. L. Polk & Co.

These supposedly foolproof figures were tainted about three years ago when auto companies happened to think that their dealers could register enough unsold cars at the end of the year to swing a close election. And the Ford-Chevy race is often close.

In 1954, Chevy nosed out Ford, in a disputed count, by only 17,000 registrations. Ford still claims it actually delivered more cars to buyers that year than Chevy did, but the record stands the other way around.

In 1955, when both cars had new body shells and Chevy offered a new V-8 engine, it was Chevrolet by a clear-cut 65,000. Last year, when Ford offered minor appearance changes and stressed safety, Chevy remodeled extensively and emphasized the "hot car" theme. Chevrolet ran up a commanding lead of 190,000 registrations.

• **Changed Views**—Chevrolet executives won't come right out and admit they have lost this year's registration race, but their attitude has changed from that of previous years. They are on the defensive for the first time.

For instance, at Chevy's preview this week (Ford comes out next Thursday; Plymouth came out a day after Chevy), Gen. Sales Mgr. W. E. Fish said:

"If we should lose out, it will be by a few thousand—I can guarantee you that. All the solace we can get from it is the fact that if our principal competitor has stood it for 20 years, I guess we can stand it for one year."

Ford, meanwhile, is talking with the confidence that comes from leadership—the way Chevrolet used to talk. "We want business leadership more than we want sales leadership," Walter J. Cooper, Ford Div.'s general sales manager, told the teen-age press conference (BW—Oct. 26 '57, p. 84). "We're not getting involved in any registration race,

and we're not going to engage in any numbers-counting deal."

However, if Ford really wants its basic car to be acclaimed as the nation's most popular, it may have to descend from its tower suite and fight in the street before the year is over. At a Chevrolet preview for dealers, a Chevy zone sales manager told his audience that sales leadership for '57 might still be retained by registering every car on hand at the end of December "in the name of yourself, your wife, or other relatives."

• **The Sales Pitch**—The strategy of the two big rivals has been evident all autumn in the lavish Broadway-type musical shows that were designed to stream up their respective dealers.

Chevrolet's theme show was "Dominate '58." Ford's show was built around the message: "The selling time of your life—'58."

Both dealer shows were expensive—neither company will say how expensive. Chevrolet contracted with the Jam Handy Organization to send seven separate show units on the road on Sept. 27 to play before an estimated 50,000 dealers and salesmen in 44 cities.

Each Chevy show unit included 20 people, including a song-and-dance cast of eight. In each city, the troupe rehearsed for two days with local musi-

cians and stagehands before staging the 1½-hour revue.

Ford's show was no less lavish. Each of its seven units consisted of an integrated Technicolor movie and stage production by Wilding-Henderson, Inc. The show was given 21 times between Oct. 3 and Oct. 25, before an estimated 42,000 dealers, salesmen, suppliers, and press people.

• **Different Approaches**—The Ford show followed a story line built around a young salesman's troubles with his girl and around the bright future offered by "The selling time of your life—'58." The Chevy show was a series of sketches introducing features of the '58 models (pictures, page 42).

The new Chevrolets are completely new—new body shell, new engines, new suspension system.

At the same time, Ford is taking advantage of the lesson it learned two years ago, when it made only superficial changes and lost ground in sales. Ford has spent \$185-million to offer the buyer a new engine, new transmission, and extensive sheet-metal changes.

Plymouth, on the other hand, is making only minor changes in appearance, resting on the design that this year won back third place over Buick and captured more than 10% of the market for the first time since 1953.

Thus, the Chevy show for dealers stressed the new features, with movie shorts explaining details of the new engine, the optional air-suspension system, the styling of the new Impala hardtop and convertible. It never mentioned a competitor by name.

Ford, on the other hand, came down hard on conquest business—seizing sales from Chevrolet—and it made no bones about naming the arch-rival.

• **Hit Him With a Six**—However, Ford's script didn't malign the competitor's product. It just stressed sales techniques.

For example, one skit concerned rival suitors (a Ford salesman and a Chevy salesman) for the hand of a young lady (the potential buyer). After each suitor has presented his arguments for himself, the Ford man slugs the Chevy man and wins by a knockdown.

"What did you hit him with—your eight?" calls the chorus.

"Naw, my six," replies the victor.

Another skit was also built around the reminder that dealers can take advantage of the lower-priced, more economical 6-cyl. model. It was presented as the mock trial of a Ford salesman who is charged with "telling a prospect that Ford's got a six." The message here was that a Chevrolet salesman reputedly always quotes a price for a six in the starting exchange of talk with a prospect, while a Ford man puts himself at a price disadvantage by quoting the eight.

What Rogers Faces



MOVING UP—Deputy Atty. Gen. William P. Rogers, taking over top spot from Herbert Brownell, has some hot ones to handle—but he's unlikely to shift policies he helped make.

Herbert Brownell—whose five-year term as Attorney General of the U.S. has been long, influential, and controversial—is leaving behind a hand-picked successor.

William P. Rogers, who can count on confirmation from the Senate when it comes back in January, is picking up some of Brownell's hot potatoes—many of them of key importance to businessmen and business policies. They include:

- Carrying out a plan to force E. I. du Pont de Nemours & Co. to divest itself of over \$2.4-billion of General Motors Corp. stock.

- Prosecuting the government's case against the merger of Bethlehem Steel Corp. and Youngstown Sheet & Tube Co.

- Winding up litigation that prevents sale of the \$100-million-plus chemical and dye firm, General Aniline & Film Corp., still held by the government as World War II enemy alien property.

- Staffing the new Civil Rights Div., and handling the complex legal and political problems that will arise out of school integration and the new Civil Rights Law dealing with Negro voting.

Rogers is young—only 44—and looks younger. But he probably is as well schooled for the job as any nominee has ever been. He has managed the department as deputy attorney general under Brownell since 1953. Before that, he had top political experience in and out of Washington. Because, as Brownell's top lieutenant, he has lived with the problems he now faces, no big switches are expected in policies.

• **Road Up**—Just 10 years ago, Rogers came to Washington to work on Capitol Hill—after serving (1) under New York District Attorney Thomas E. Dewey (1938 to 1942), (2) in the Navy during the war, and (3) under New York District Attorney Frank Hogan (1946 to 1947).

Rogers made his name in Washington as chief counsel of two major investigating committees. In 1947, he became chief counsel of the former Truman War Investigation Committee, then under Republican control. In 1948, when the Democrats regained Congress and created a successor committee—the Senate Executive Expenditures Subcommittee—Rogers stayed on as chief counsel, serving until 1950.

• **Political Tie**—Perhaps the biggest political fact about Rogers is that he is

As a First-Team Man

clearly V.P. Richard Nixon's closest political intimate. If you believe Nixon is the man to beat for the Republican nomination for President in 1960, as of today you'd have to count Rogers as likely to be one of the half-dozen key figures in the Presidential contest.

Political reporters all swear it was Rogers who guided and helped Nixon when disclosure of the expense fund maintained for him by California friends threatened Nixon's place on the 1952 Republican ticket.

• **Key Spot**—As he takes on the top job and prime responsibility for policy, Rogers will find himself subject to more attack than he's been accustomed to—particularly on the controversial issue of civil rights. Though his confirmation is certain, Rogers will get his first taste of this new treatment when the Senate Judiciary Committee—headed by Mississippi's pro-segregationist Sen. James O. Eastland—meets on his nomination.

The U.S. Justice Dept. that Rogers takes over is—even Democratic critics agree—a well-run shop. It's the world's biggest law firm. It enforces a host of federal laws. It administers the federal prisons. It makes hundreds of antitrust investigations a year. It tries and defends all cases involving the government and the public treasury. It prosecutes tax violators, spies, and Communist-dominated unions. And now it will launch a new civil rights enforcement program under last summer's legislation.

I. Antitrust and Business

For U.S. businessmen, the interpretation of the antitrust laws—and the enforcement of that interpretation—is the part of Rogers' job that is of the greatest concern.

Under Brownell vigorous antitrust law enforcement has been one of the major hallmarks of the Eisenhower Administration. Rogers is not going to change that.

• **Legacy**—Rogers inherits one principal task left unfinished by Brownell: To obtain through successful prosecution of a test case a positive court interpretation of the Clayton Act's vague language giving the department broad authority to bar corporate mergers.

The courts are already helping build the department's authority here. For instance, the Supreme Court made a historic application of the Clayton Act's anti-merger section in the du Pont-GM case last June. In declaring du Pont's long-standing stock ownership in GM illegal under that law, the court set up major principles for future merger cases.

But the primary goal of the antitrusters is to secure court orders against mergers or acquisitions before—and not after—they occur.

Rogers has inherited one test case in this stop-them-before-they-marry approach. That's the government suit aimed at blocking the proposed merger of Bethlehem and Youngstown.

Rogers will also have the final say in directing the department's other pending major anti-merger cases—against Continental Can Co.'s acquisition of Hazel-Atlas Glass Co. and Robert Gair Co., Inc.; against Owens-Illinois Glass Co.'s acquisition of National Container Corp.; and against El Paso Natural Gas Co.'s acquisition of Pacific Northwest Pipeline Corp.

• **Heavy Calendar**—There's a wide range of other big antitrust cases pending. These include the government's air transportation monopoly case against Pan American World Airways and W.R. Grace & Co.; the oil cartel case involving at least six major U.S. oil companies; a bus monopoly suit against General Motors; and the far-reaching radio-television research and patent monopoly suit against Radio Corp. of America (which, incidentally, Rogers himself filed as acting attorney general in Brownell's absence).

Negotiations for consent settlements—out of court—have been under way in several of these, notably the Pan American case. In each, Rogers must decide whether to accept consent settlements—a major enforcement tool employed under Brownell—or fight it out in court.

The consent decree method is currently under attack by antitrust gadfly Emanuel Celler (D-N.Y.), chairman of House Judiciary Committee, but so far, he has not established any major points. The consent technique is so useful that Rogers will continue to employ it wherever possible.

• **Tougher?**—Some observers think Rogers might even be tougher than Brownell in at least one phase of antitrust enforcement—prosecution of oil companies. Rogers was chief counsel of the Senate investigating committee in 1948 that accused the Arabian American Oil Co. and its affiliates of overcharging the Navy on wartime sales.

Rogers' experience and contacts on Capitol Hill will be used to push new antitrust bills. The most important is the so-called pre-merger notification bill, pending in both houses, requiring 60-days advance notice to the government before big companies may complete merger or acquisition plans (BW—May 25 '57, p153).

• **Picking Men**—Rogers says now he

plans no major personnel shifts. But he has at least three major positions to fill. They are his own post as deputy attorney general; a new assistant attorney general to head the Criminal Div. (left vacant by the resignation of Warren Olney last month); and an assistant attorney general for the new Civil Rights Div.

II. Major Headache

Right now, civil rights shapes up as Roger's No. 1 legal headache. The man he picks to head the Civil Rights Div.—whose primary job will be safeguarding Negroes' right to vote—will be handling some of the touchiest political and constitutional issues since the Little Rock impasse began.

There is every indication that Rogers is in complete accord with the Administration's course of action on civil rights generally and at Little Rock, specifically.

In the passage of the civil rights legislation Rogers played the key role in the Administration's effort to obtain a stronger bill than the Senate version.

• **New Powers**—The new Civil Rights Div. is one result of that legislation.

The new civil rights law permits the Attorney General to initiate a case as soon as there is evidence that, for example, some individual is being deprived of the right to vote. Heretofore, the government had to await court action by the individual himself.

There is little doubt—after Little Rock—that this division will also figure in any future cases involving the failure or refusal of local authorities to carry out federal court orders to integrate public schools.

• **Alien Property Issue**—Though certainly less controversial, the remaining holdover issue facing Rogers—disposition of the last piece of alien property, General Aniline & Film Corp.—is complicated by a maze of court cases and the perennial effort by a Congressional bloc to return alien property in full to its former owners—or an equivalent sum, if it has been sold.

Rogers will walk a cautious line on this issue. The GAF case is now before the U.S. Supreme Court, and there is another round of Congressional debate coming up on full return.

Up to now, the Administration—primarily because of Brownell—remained dead set against any return to corporate owners as such, and wanted to limit return to individuals to \$10,000 per claim. This is far short of what Congressional backers—such as Sen. Everett Dirksen (R-Ill.) and Sen. Olin D. Johnston (D-S.C.)—favor. Last July, the White House cryptically announced it would submit a "supplementary" monetary return proposal in January.

Treasury's Eye Is on Ceiling

Officials hope to squeak through without asking Congress to raise the debt limit. Actually, the situation may not be so serious as the Administration is letting on.

For months now, the debt ceiling has become a real day-to-day factor in the decision-making of government officials. It has been the Administration's final answer to all criticisms on budget-cutting, contract stretchouts, cancellations, and progress payments.

But actually, guardians of the \$275-billion federal debt ceiling are breathing easier these days.

Barring unexpected bad luck, they think they are going to stay beneath the ceiling, even during the next few months when tax receipts are seasonally at their lowest and the debt always rises.

• **Behind the Confidence**—Here is what is behind the confidence of the Treasury Dept. debt managers:

- They came into the critical period with a fat cash balance of about \$7-billion. That's a billion more than a year ago.

- A couple of billion dollars of extra receipts are in sight.

- The Administration's hold-down on spending already is saving them cash.

- **Official Line**—This, however, is not the picture of the debt situation that the Administration is presenting. The official word going out to spending agencies is that only the most heroic hold-down on expenditures will save the debt from going through the ceiling. Disbursing officers in the Pentagon, for example—where economy drives are usually greeted with a shrug—feel this time they are in an all-out fight to save the government's credit standing. The Administration will do or say nothing to lessen this belief. Treasury officials say only, "It's going to be a tight squeeze, but we have hopes of making it."

- **Increased Importance**—The result of all this has been to raise the debt ceiling to the most important role it has ever played. A few weeks ago, rumors spread that the Administration would even call a special session of Congress this winter to have it increased—talk that has died out in the meantime. Another theory is that the Administration will have to ask Congress for an increase the day it convenes next January. Officials have used the debt ceiling as an explanation of why payments made to industries under government contracts have been reduced or slowed down. Now the belief is spreading that the government is not paying its bills, in a desperate effort to avoid the ceiling.

"We're paying our bills," a Treasury

official snapped this week. "All we're doing is asking Air Force contractors to supply 20% or 25% of their working capital instead of the 15% they've been getting by with." This, in effect, would mean a reduction in progress payments made to suppliers during the production process. To Treasury officials it has nothing to do with paying bills when due.

- **Earlier Practice**—The debt ceiling has been on the books since World War II, at one level or another, mostly as a symbol of good intentions. In the past, when requested, Congress quickly gave temporary increases in each of the last four fiscal years—three times raising the ceiling by \$6-billion and last year by \$3-billion. The purpose was to allow the then Secretary of the Treasury, George M. Humphrey, to operate comfortably below the ceiling.

- **Change of Heart**—This year there was a switch. Harry F. Byrd, chairman of the Senate Finance Committee, declared that under no circumstances would he approve an increase this year. So, at the climax of last summer's running economy battle between Congress and the White House, Robert B. Anderson, the new Secretary of the Treasury, had to decide whether to ask for the increase anyway or take a chance on squeaking through under the \$275-billion ceiling.

He gambled on squeaking through, and now it looks as though he is winning. At least his situation is much happier than it appears to be on a casual reading of the statistics—and better than most government people think it is.

The latest figures on the debt look ominous: It is listed at \$274.5-billion, just a half billion under the ceiling.

- **Exclusions**—But these figures don't tell the whole story. All of the \$274.5-billion is not subject to the limitation. The sum involved is not stated in the published figures, but it comes to \$444-million at the present time, chiefly non-interest-bearing U. S. notes, deposits set aside to retire such notes, and \$50-million worth of Panama Canal bonds.

I. Ready Cash

But the key factor overlooked by most debt-watchers, outside of a handful of Treasury technicians, is the connection between the debt figures and

the Treasury's cash balance. Published debt figures do not reflect wide swings that occur seasonally in the cash balance. Thus debt subject to ceiling was less than \$1-billion below the ceiling at the time of the latest month-end figures. But the cash balance at the same time was over \$6-billion. On an emergency basis—if confronted with the prospect of actually going through the ceiling—the Treasury could allow this balance to run down.

It does exactly that every year when the pinch is the tightest—from Dec. 15 to Jan. 15, after which a surge of tax receipts puts an end to the problem for another year. The balance is allowed to get down to \$1-billion during this one period.

- **Cash Balance**—Adjusting for cash, the Treasury actually was \$6-billion from going through the ceiling at the end of September, rather than the \$1-billion indicated by debt figures. And even compared to a year ago, Anderson is doing nicely as far as cash is concerned. He's got about a billion more on hand than Humphrey had a year ago.

In recent years, on the basis of the cash balances, the Treasury actually would have gone through a \$275-billion limit only once. That was in fiscal 1956, when debt-minus-cash hit \$276.4-billion at the end of January. Last year the closest brush came in December, when debt-minus-cash was \$272.6-billion at the end of the month.

II. Higher Receipts

The relief coming to Anderson from the receipts side of the budget is due partly to special devices at his disposal, partly to an increase in corporation taxes due under the pay-as-you-go formula. This latter will provide about a billion dollars more revenue in the lean tax collection period than came in last year. It is payable by corporations in December, when 15% of the estimated liability on 1957 profits is owed instead of the 10% that was owed a year ago.

Anderson has already used one of his special devices: At his request, the Federal National Mortgage Assn. raised \$802-million by selling securities to the public, and will turn the money over to Anderson. He will use it to meet current obligations, and thus ease the forthcoming pressure on the ceiling. Fanny Mae's debt is not subject to the limitation.

- **Ace-in-the-Hole**—Anderson has another ace. Some \$500-million worth of paper profits, created when Pres. Franklin D. Roosevelt devalued gold in the early years of the New Deal, is still carried on the Treasury's books. It can be turned into a Treasury receipt anytime at the direction of the Secre-

tary. The guessing is that Anderson will take the step before the midwinter scramble begins.

From these sources, Anderson can expect some \$2.3-billion more than the Treasury received last year. There will be a drop in corporation tax receipts, in all likelihood, due to narrowing profit margins. But the take from the individual income tax is running somewhat ahead of last year. On balance, Anderson seems well ahead on the receipts side.

III. Spending

Spending is the happiest surprise for the Treasury watchdogs.

The Defense Dept., for example, expected to spend \$10.4-billion for military functions in the July-September quarter. It actually spent \$9.8-billion. This is a better getaway for the fiscal year than anyone expected, and promises well for the October-March period. And the recent decision to revoke cutbacks on research and weapons development won't affect the picture either, since the actual spending won't occur until after the critical period is over.

Here are major defense department actions in recent months that are related to the campaign to save the debt ceiling:

- The services stretched out production schedules—for at least 19 big plane and missile projects.
- Overtime for defense contractors was restricted.
- "Installment buying" of weapons was banned.
- A \$38-billion spending ceiling for fiscal 1958 was clamped on, stimulating a new round of program reshuffling. From this action came the 5% reduction in progress payments; an order to contractors to cut payroll costs 5%; the Air Force's limitations on monthly payments to contractors, creating new stretchouts; a 200,000-man cut in the armed forces.

• **Unlikely Possibility**—If all this fails to rescue Anderson—if his cash balance is exhausted, if debt is at the \$275-billion limit, and the bills pile high on his desk—what then?

Some argue that he could issue securities anyway, violating the ceiling, in full knowledge that the U.S. government would never repudiate such debt instruments. The securities in such a case would probably be Treasury bills, which are purchased in the belief that they are as good as cash.

Any such legal cloud, no matter how brief or how vague, would lessen their acceptance, of course. Instead of getting into such risky waters, Treasury officials would rather face an angry Congress, even in an emergency session, and plead for a higher ceiling.

Wall St. Takes Its Bearings

Chances are there'll be no real break in the calm that followed last week's market rally—until there's some sign of a definite shift in business activity.

Wall Street had the quiet and deceptive air this week of the calm after a storm.

The stock market, after the post-climactic one-day buying wave that followed the climactic sell-off, drifted in a narrow trading range that was featured by slackening volume. And in the bond market, underwriters absorbed \$250-million of American Telephone & Telegraph Co. debentures at 4.94%—a lower rate than had been anticipated, and a sign that the bond market, too, was in a less sensitive state.

There is no way of knowing how long this calm will last, or just what will follow it. Such lulls are not unusual, particularly after a period of frenetic activity, with wide swings and heavy trading volume, such as the stock market has just experienced. There is now an uneasy balance between buyers and sellers. This balance can be upset by buying demand, which would send prices up, or by a new selling wave, which would test the low reached in the selling climax.

• **What Next**—It is probable that the stock market will make no major move until there is a definite shift in business activity—and what happens will depend on investor reaction to any such shift. The one-day recovery in stock prices that arrested the continued decline was largely a technical reaction, but Wall Street was also betting that the Administration would move to prevent an economic downturn. That gave the upturn an added lift.

If Washington takes no positive steps, or if the economy shows increasing weakness, the calm may give way to a new storm of selling. But at the moment there is none of the frantic nervousness that was prevalent during the decline. As one broker put it, "We've had a bad case of the jitters, and it would take a really big war scare or economic drop to bring them back."

• **Tension on the Wane**—The last stage of the decline in stocks was marked by distress selling and liquidations. Some investors had margin accounts and bank loans, backed by stock collateral called. Others simply wanted to be in a liquid position, and cashed in their holdings. The desire for liquidity, according to Wall Street, was the most serious sign of real nervousness.

Now this nervous tension has subsided. There is no strong desire to increase equity holdings, but neither is there any substantial turn away from

stocks as investments. The drying up of trading volume indicates that investors have not yet made up their minds about the next turn, and are no longer being forced into selling.

• **Healthy Sign**—Stock market technicians feel that the present drift is a healthy sign. They had feared that the technical recovery would prove to be a temporary rebound. "If the market had sold off again following the recovery," said one chart follower, "it would have meant that investors were under continued strain. Now you may not see an early testing of the old highs, but it looks as if a new plunge is also less probable."

This less bearish sentiment is also apparent in the bond market. When stock prices were under pressure, bond prices, which normally rise when stocks go down, were also hit. Underwriters explain that the Federal Reserve's tight money policy and the over-all desire for liquidity combined to create a depressed situation in bonds.

Underwriters report that the liquidating pressure in bonds is also past.

• **Tranquilizer**—Moreover, the impression that the Fed is no longer intensifying restraint has gained ground, which has helped the improvement in the tone of the bond market (BW—Oct. 26'57, p45).

The monetary managers refuse to say that they plan a rapid shift to easy money, merely that they are no longer intensifying the squeeze on credit. Certainly, it does not appear that any drop in the current discount rate of 3 1/4%—the rate charged member banks for their borrowings from the Fed—or any other public signal can be expected immediately. A more valid assumption is that the Fed has lowered its negative reserves target—the amount that the banks are in hock to the Fed—from the \$400-million to \$550-million range to \$250-million to \$350-million range. This would mean less of a squeeze on the banking system.

It also means that the bond market has seen the peak in borrowing rates, and that all other interest rates will now begin to edge down. But there will not be a drastic change in interest rates until the Fed takes more positive steps. Fed officials say that no big shift will come until they are sure that an economic downturn is in the cards. The Fed does not want to "overstay" the boom, says one official, but it should not take a big step prematurely.

Profits Shrink Each Quarter

Third-Quarter Earnings — A SAMPLING

	NET PROFIT					
	THIRD QUARTER			FIRST HALF		
	1957	1956	% Change	1957	1956	% Change
(millions of dollars)						
BUILDING MATERIALS						
Alpha Portland Cement...	\$1.0	+\$1.5	-36.8%	\$2.3	+\$3.1	-26.0%
Johns-Manville.....	5.7	7.0	-17.7	8.6	12.0	-28.2
Marquette Cement Mfg...	3.2	2.7	+18.0	2.6	3.2	-17.8
Kubera.....	1.8	1.5	+17.1	1.9	1.7	+13.8
U. S. Gypsum.....	11.3	11.0	+2.7	18.8	20.8	-9.5
CHEMICALS AND DRUGS						
Allied Chemical & Dye...	10.8	9.5	+13.5	22.1	25.5	-13.4
American Cyanamid.....	13.1	10.5	+25.1	23.7	23.0	+3.0
E. I. du Pont de Nemours...	92.4	85.8	+7.7	201.2	187.8	+7.1
Monsanto Chemical.....	8.8	6.8	+28.8	22.2	22.0	+0.9
Rohm & Haas.....	3.3	3.3	+0.5	8.3	7.8	+6.3
CONSUMER GOODS						
Eastman Kodak.....	25.4	22.2	+14.5	40.2	38.8	+3.8
Industrial Rayon.....	d0.5	0.6	...	1.4	3.5	-59.4
Gillette.....	7.4	6.7	+10.1	13.0	16.2	-19.7
Revlon.....	2.1	2.1	-1.4	4.5	3.9	+16.5
ELECTRICAL EQUIPMENT						
General Electric.....	55.2	47.9	+15.3	127.8	112.9	+13.3
Minneapolis-Honeywell Reg.	4.1	5.0	-17.0	10.3	9.6	+7.8
Stewart-Warner.....	1.2	1.5	-19.6	3.4	3.2	+6.1
Radio Corp. of America...	8.0	7.9	+1.9	20.3	20.0	+1.4
GLASS						
Anchor Hocking Glass....	1.8	0.8	+119.6	3.7	3.1	+19.7
Libbey-Owens-Ford Glass....	3.9	4.6	-15.1	14.3	15.1	-5.3
Owens-Illinois Glass....	9.1	8.7	+4.7	17.1	17.3	-1.3
Pittsburgh Plate Glass....	14.4	12.5	+14.7	29.2	30.3	-3.4
MACHINERY						
Allis-Chalmers Mfg.....	3.5	3.9	-8.3	11.3	11.9	-4.8
Caterpillar Tractor.....	9.9	13.5	-26.9	27.4	27.4	...
Eaton Mfg.....	1.9	1.6	+20.9	6.6	7.5	-11.7
Husmann Refrigerator.....	0.6	0.9	-38.2	1.2	1.2	-4.7
International Bus. Mach....	22.3	17.4	+28.6	40.1	31.9	+25.7
National Cash Register....	4.0	4.9	-18.2	8.2	7.7	+5.9
METALS						
Freeport Sulphur.....	3.0	3.3	-8.3	6.7	6.8	-1.8
National Lead.....	12.6	12.5	+0.7	30.1	29.0	+3.9
St. Joseph Lead.....	1.4	2.3	-38.6	5.8	5.1	+13.5
Revere Copper & Brass...	1.9	2.0	-4.8	4.6	5.0	-9.7
Reynolds Metals.....	9.2	6.4	+42.2	18.5	23.5	-21.2
OILS						
Gulf Oil.....	74.5	72.5	+2.7	177.6	144.5	+22.8
Phillips Petroleum.....	20.8	20.0	+4.1	53.4	51.6	+3.6
Shell Oil.....	30.5	30.7	-0.7	75.3	69.4	+8.5
Socorro Mobil Oil.....	51.0	59.0	-13.6	132.0	124.0	+6.5
Standard Oil (N.J.)....	197.0	211.0	-6.6	463.0	392.0	+18.1
Sunray Mid-Continent Oil...	11.1	9.4	+17.6	33.9	24.1	+40.9
PAPER, CONTAINERS						
Container Corp. of Amer...	3.6	4.3	-16.5	7.9	9.7	-19.0
Continental Can.....	14.5	13.8	+5.6	19.6	20.6	-4.8
Scott Paper.....	5.1	5.1	-0.1	10.8	11.4	-5.5
Union Bag-Camp Paper...	4.4	5.0	-11.8	9.1	10.9	-16.3
STEEL						
Granite City Steel.....	1.6	3.8	-57.3	6.3	7.7	-18.4
Inland Steel.....	13.4	6.5	+104.9	29.8	30.0	-0.7
Jones & Laughlin Steel...	11.4	1.4	+736.5	26.6	30.9	-14.0
Republic Steel.....	20.1	4.3	+367.3	52.9	51.5	+2.7
U.S. Steel.....	97.6	34.8	+180.4	231.4	208.6	+11.0
Youngstown Sheet & Tube...	9.9	3.4	+192.5	21.9	21.5	+1.9
TOBACCO						
Liggett & Myers Tobacco...	7.9	7.3	+8.3	13.3	12.2	+8.7
P. Lorillard.....	3.1	0.8	+276.0	2.7	2.3	+18.6
U. S. Tobacco.....	0.9	0.6	+39.2	1.4	1.3	+8.0
TRANSPORTATION EQUIPMENT						
Chrysler.....	13.8	d12.4	...	89.7	18.7	+380.6
Douglas Aircraft.....	8.0	7.8	+3.4	16.7	12.8	+30.1
General Motors.....	122.2	136.1	-10.2	481.2	503.5	-4.4
General Tire & Rubber...	2.7	2.0	+34.4	5.8	4.0	+44.4
White Motor.....	1.6	1.4	+7.1	3.4	3.6	-6.0

NOTE: Percent change may not agree with figures shown due to rounding.

† Non-recurring profit excluded

d=deficit

The slide in corporate earnings that began to show early this year is deepening bit by bit.

Third-quarter earnings, continue the downward trend that the second quarter showed (BW—Aug. 3 '57, p23). Although the first half-year stayed roughly even with the corresponding period of 1956, Commerce Dept. figures indicated that the second quarter dragged down a superior first quarter. The latest quarter is still lower.

As the table shows, about half of the companies that have so far reported made less gain in the third quarter than in the first half. And the comparison as a whole would be more unfavorable if third-quarter 1956 had not been artificially depressed by, for example, the steel strike.

• **The Metals**—Third-quarter comparisons for the steel companies are thus misleading, and financial experts predict that the fourth quarters will not compare so favorably for 1957.

Steel output has been on the decline, dipping this week to an expected 79.1% of capacity. Fourth-quarter estimates of between 85% and 90% of capacity have been revised down to about 80%. Orders have been disappointing.

Other metals companies also report a less favorable comparison with a year ago for the third quarter than for the first half of the year.

St. Joseph Lead showed net 13.5% higher during the first six months, now reports third-quarter net down 38.6% from a year ago. Sales dropped only 1.3% in the first six months but 12.8% in the third quarter.

Kennecott Copper's third-quarter earnings fell 41.7% below a year ago. However, this decline doesn't equal the 44.6% drop in the first six months. The nine-month net is now 44% below the comparable period last year. Operating income fell 6.5% in the third quarter, 15.9% for the nine-month period.

• **Electrical Goods**—The group of companies making electrical equipment suffered a reverse from the gains they made in the first half-year.

Robertshaw-Fulton Controls Co., for example, reports a 37.7% decline in net for the third quarter, compared with a year ago. But the first half stood high enough so that there's a 3.6% gain for the whole nine months. Sales for the nine months reached an all-time high for the period, though third-quarter sales slid a bit.

Minneapolis-Honeywell Regulator Co. also notes that third-quarter sales dragged down the nine-month figure. Sales gained 9.4% in the third quarter;

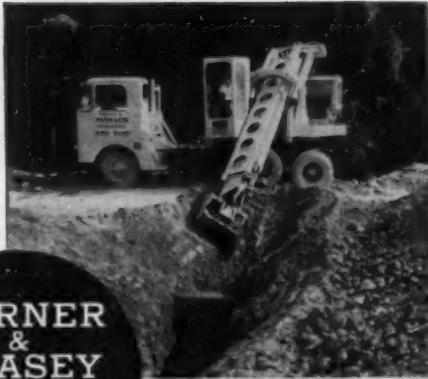
While one half an escalator goes **UP** the other half has to go **DOWN**

OTHERWISE there soon will be no Up side to the escalator—the whole machine will stop.

But in union-negotiated wage contracts, the only side that many union leaders see, demand, and get, is Up.

But the Down side *is* there—it has to be. The *public* rides the Down side—in lower and lower purchasing power, lower and lower value of everyone's savings and bonds and life insurance. Every time the Up group gets an unearned wage increase, there has to be a price increase to pay it. (All honest men know it cannot come out of company profits. If you took them *all* you could pay only a small wage increase, and with no profits, you'd soon have no new machinery, no new or growing companies, soon no jobs.)

The only way real wages can be increased without ruining the country and everyone in it, including the wage earner, is to *produce* more so everyone can *have* more. That's a stairway instead of an escalator. It takes some effort to go up a stairway, but you *do* go Up—and there need be no Down slide toward ruin for everybody.



WARNER & SWASEY
Cleveland
PRECISION MACHINERY SINCE 1880

Gradall trenches for installation of utility lines in housing project in New York State.

the nine-month gain over last year was 19.2%.

Stewart-Warner's third-quarter sales decline of 17.3% pulled sales for the nine months 2.6% below year-ago.

• **Auto Companies**—In the automotive fields, General Motors followed the downward trend. Earnings were off 4.4% in the first half, 10.2% in the third quarter. This pulled the nine-month net 5.7% below a year ago.

However, Chrysler Corp., with a hot line of cars to sell, turned last year's third-quarter deficit into a net profit of \$13.8-million this year, pushing the nine-month figure still farther above the 1956 level. Third-quarter sales rose 59.4%, lifting the nine-month sales total by 47.7%.

Ford Motor Co. also had a sparkling third-quarter performance. Sales climbed by a record \$1.4-billion—a gain of 62.3% over last year. Net ran more than four times the year-ago pace. Pres. Henry Ford, II, attributes the sharp rise in profits partly to the later Ford and Mercury changeover this year, which kept sales at a higher level and also moved some of the costs into the last quarter.

• **Oil Companies**—Earnings of the oil companies were generally poorer for the third quarter than for the first half. Demand for products was disappointing; inventories remained high.

This group of corporations appears likely to provide the year's biggest money-maker. Standard Oil Co. (N.J.) turned up at midweek with a nine-month net of \$660-million, compared with \$603-million last year. Meanwhile, GM, last year's leader, dropped from \$640-million in nine months of 1956 to \$603-million this year.

Socony Mobil Oil Co. reported a rise of 6.5% in net in the half-year, a decline of 13.6% in the third quarter. Shell Oil Co. showed an 8.5% rise for the half, a decline of 0.7% for the third quarter—despite a sales gain of 7.5%.

Standard Oil Co. (Ohio) skidded in both sales and earnings. Sales were up 6.9% in the first half, but a strike that closed the refineries from June 7 to Aug. 19 drew third-quarter sales down 3.6% from a year ago.

• **Better Than First-Half**—A few groups of companies did better in the third quarter than in the first half, without having much to shout about. For performances not affected by artificial factors such as strikes, the chemical and drug groups show about the best third-quarter comparison of all.

Building material companies show a third-quarter improvement, too, but their 1956 third-quarter was pretty low to start with. For the paper and container companies, the third quarter was in most cases better than the first half.

More Insurance, Less Money

Mutual Benefit Life has joined the growing group of companies now figuring premiums on policy size—the bigger the policy, the less it costs per \$1,000.

In its 112 years, Mutual Benefit Life Insurance Co. of Newark has never changed its structure of premium rates so radically as it did this week.

Historically, insurance companies have based rates on two factors: (1) the age of the buyer and (2) the type of coverage selected. Within this framework, rates have traditionally been equal. A man paid the same price per \$1,000 insurance as anyone of similar age and health; the only variation was with the plan selected.

Now Mutual Benefit has added a third factor—size of the policy. This follows a trend initiated by Northwestern Mutual Life Insurance Co., Milwaukee; Bankers Security Life Insurance Society, New York; Standard Insurance Co., Portland, Ore.; Mutual Life Insurance Co. of New York, and a handful of others.

• **More for Less**—Mutual Benefit touts its new rates as AC-DC (added coverage, decreased cost)—the bigger the policy, the lower the premium (per \$1,000).

The company has set up four price brackets. Group I covers policies from \$2,000 to \$7,499, Group II from \$7,500 to \$12,499, Group III from \$12,500 to \$24,999, and Group IV from \$25,000 up. The higher the price bracket, the greater the reduction from the Group I per-\$1,000 rate.

The move, says Harry W. Jones, vice-president of Mutual Benefit, is a recognition that certain expenses of handling policies (medical examination fees, for example) are the same whether the policy is for \$1,000 or \$10,000. These expenses become lower per \$1,000 as the amount of the policy increases. "We're passing on the saving," says Jones.

However, there has already been criticism of using policy size in determining rates. Many insurance men fear it breaks the tradition of equality for all policyholders. Small policyholders, they warn, might be asked to carry more than their share of expenses.

• **Sure to Spread**—It seems clear, though, that pricing by size will spread—for several reasons:

- It's bound to improve sales. Mutual of New York attributes the bulk of its 24% sales increase this year to "quantity discount" premium rates.

- State regulatory bodies have sanctioned the new approach.

- It's an answer to price competition within the insurance industry

through so-called "specials," introduced in recent years by companies yearning for the market in large policies.

At the outset, these "specials" differed from run-of-the-mill insurance contracts in three ways: (1) they generally required excellent health in the policyholder, (2) lower commissions were paid to agents, and (3) the minimum policy size was higher. Lately, however, some companies have been issuing "specials" on so-called "sub-standard lives" as long as the customer was willing to pay the price.

• **Figuring Premiums**—A life insurance contract is a jungle of surrender, lapse and nonforfeiture clauses. Boiled down, it simply says that you promise to pay a premium that will build up cash value—aided by the interest earned on a company's reserves. Depending on the type of policy, you—or your beneficiaries—get face value back at the end of a contracted time. Term insurance is an exception; it merely protects the buyer during a specified time.

To determine premiums, an insurance company measures three factors: its mortality tables, the interest rate anticipated on its investments, and expenses. Each of these factors contains a certain amount of water. Mortality tables are notoriously conservative; companies hedge their estimates of investment income for the sake of safety, and they do the same to forecasts of expenses. To top it off, insurers add a safeguard for "emergencies."

In a nonparticipating policy—the type normally offered by stock companies—the final premium figure is close to actual net cost. In a participating policy—mostly issued by mutual companies (which account for about 70% of industry sales)—the final figure is a conservative gross premium. The mutuals then compute competitive net costs and pay the difference in dividends—actually just a return on the premium—to their policyholders.

• **Prosperity**—Pricing by policy size is now possible because the mutuals can pare their gross premiums down and dispense with extra safety margins. They can do this because:

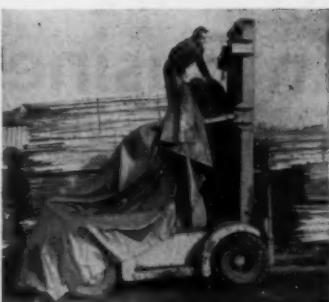
- Last year's earnings for the life insurance industry were 3.63%, the highest in 19 years.

- Surplus funds (legally limited in New York to 10% of policy reserves and deposit liabilities) are plentiful.

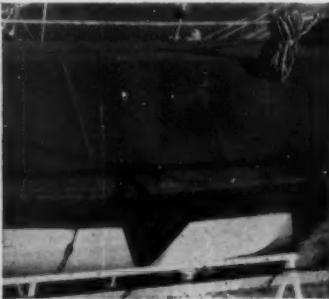
- Electronic bookkeeping machines are cutting expenses.



COATED NYLON fabrics are light in weight...make for easier handling when used to protect concrete construction work...simplify storage.



COATED NYLON—provides economical protection for equipment.



COATED NYLON—lifeboat covers are rot- and mildew-resistant.



COATED NYLON—durable, long-lasting protection for open-top trucks.

Coated Du Pont nylon fulfills today's need for waterproof fabric on hundreds of jobs

Coated Du Pont nylon fabrics now provide long-lasting protection in hundreds of ways...for open-top trailer trucks and costly equipment exposed to the elements...lifeboat covers and newly placed concrete on construction jobs, to name a few.

These durable covers of coated nylon are waterproof, economical, light in weight, easy to handle and easy to repair. A variety of coatings are available for many different purposes. When properly fabricated, covers of Du Pont nylon will last up to three times as long as other covering fabrics. In addition, they resist the damaging effects of rot, mildew, chemicals, exposure to weather and general hard wear. And they remain flexible even when used in sub-zero temperatures.

Look into modern coated nylon covers now. Learn how they are filling protective requirements on hundreds of operations. Your regular fabricator or fabric supplier will gladly give you further information, or write: E. I. du Pont de Nemours & Co. (Inc.), 5518 Nemours Bldg., Dept. BW-11, Wilmington 98, Delaware.



BETTER THINGS FOR BETTER LIVING :: THROUGH CHEMISTRY

COATED NYLON—long-wearing...easy to handle...lightweight
...waterproof...resistant to rot and mildew

In Business

Bethlehem Sees Hurt to U.S. Economy If No Trial is Held on Its Merger

Bethlehem Steel Co. and Youngstown Sheet & Tube Co. this week told a federal District Court in New York that failure to hold a trial on their proposed merger could mean a great disservice to the steel industry and to the whole U.S. economy.

The Justice Dept. has demanded that the court give a summary judgment in the case, which in effect would decide it without a trial. A decision on the motion is expected soon.

In fighting the demand, the companies in a joint brief charged that the government's argument against the merger was "doctrinaire," and ignored the facts of economic life in the steel industry. Furthermore, say the companies, the government concentrated on the mere bigness of the parties rather than on the law, which is concerned with the possible lessening of competition.

The companies say that even where they serve common customers, the actual shipments are usually to different destinations, because most such customers are multi-plant operations that draw on several sources of steel supply. The companies add that such competition as would really be destroyed is marginal, in fields controlled by other producers. They claim that the loss of such marginal competition would be tiny compared with the new competition that the merged companies could furnish in the mid-Continent area, but which they cannot furnish singly.

Shareholders Shudder, But Action Is Far Off On Plan to Divest du Pont of GM Shares

Du Pont stockholders, and Wall Street generally, this week were staring a bit blearily at the Justice Dept.'s proposal for carrying through the disposal of du Pont's 23% stock interest in General Motors, as ordered by the Supreme Court. Mostly, the reaction was that final settlement is so far away that there's no use worrying now, despite the rather grim tax aspects of the Justice Dept. proposal.

The government has suggested this plan to Judge Walter J. LaBuy: 60% of the GM stock would be distributed *pro rata* to du Pont stockholders—excluding du Pont family interest. The remaining 40%—proportionate to family holdings in du Pont—would be put up for sale, with the non-family du Pont stockholders given first whack. The whole operation would be spread over 10 years.

The proposed settlement would also enjoin du Pont from influencing GM or dealing with it on a preferential basis.

As of now, du Pont lawyers have 60 days to prepare

an answer to the plan; then the antitrust lawyers have 30 more days to cook up their counter reply.

Meanwhile, it is pointed out that the Justice plan would mean that du Pont stockholders would have to pay full income tax on the value of the GM stock received, which could be a painful experience.

Opening of New Store in Nashville Gives Old Foes Fine Day For Sniping

The purchase of Cain-Sloan Co., old-line Nashville department store, by the Allied Stores chain has brought no end to the sniping between C-S and its up-and-coming rival, Harvey Co. (BW-Mar.27'54,p124).

Last week, when Allied opened a spang-new Cain-Sloan store (346,408 sq. ft), these amenities were exchanged by the foes, which feuded for years over a lease:

- Fred Harvey ran a full-page ad congratulating Allied—mostly by contrasting it with what the old C-S ownership had not done.

- John Sloan, who will remain as president of C-S, and Harvey pointedly did not shake hands at a ceremonial lunch heralding the new store.

- Harvey sent the new store a huge wreath, said to be strictly the funeral type. The wreath ended up in obscurity: in the men's room, said Harvey; in the background, because of its poor taste, said a C-S official.

Business Briefs

Pittsburgh's cops have had a change of heart; they no longer want, and won't get, a tax-avoiding shift of \$1,300 from pay to allowance (BW-Oct.26'57,p54). Reason: The move would play hob with their pensions.

The American Management Assn. has detected a marked slowing down in the rate of increase in the salaries of engineers and technicians. For the fiscal year ended June, 1957, engineers' salaries rose an average 5.9%, compared with 8.6% for the previous 12 months.

The Asian flu epidemic should peter out in "eight to 10 weeks," a government medical advisory committee said last week. If that news doesn't stop your sneezing, try this: A much more potent vaccine may be in production by Dec. 1, says U.S. Surgeon General Burney.

The Federal Trade Commission says Gulf Oil Corp. violated the Clayton Act when it bought Warren Petroleum Corp., of Tulsa, nearly two years ago. FTC says Warren was the largest independent producer of natural gasoline, and that the purchase cut competition in that field and in LPG. Gulf denies the charge, which was filed in federal District Court, Pittsburgh.

The Atomic Energy Commission this week made it official that its supply of uranium had reached the long-expected point of plenty (BW-Apr.21'56,p30). AEC advised producers not to do any expanding based on the idea that the agency would increase its purchases.

EXTRAORDINARY BEARING PROBLEMS?

"REALI-SLIM" BALL BEARINGS



Ball radial



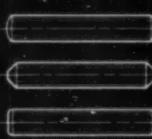
Angular contact



4-pt. contact

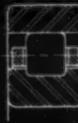
Cross sections from $\frac{1}{4}$ " to 1" and 4" to 40" bore diameters. Some sizes available from stock.

NEEDLE ROLLERS

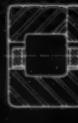


Spherical, conical or flat-end types

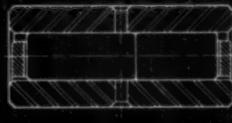
RADIAL ROLLER BEARINGS



Lipped inner, straight outer race types RN, RX and RNW



Lipped inner, one lip outer, side ring type RP



Straight inner, straight outer, mill type RM

THRUST ROLLER BEARINGS



Straight roller, flat race, type RT

Conical roller type RTC



THIN SHELL NEEDLE BEARINGS

NEW!



Type KN

Standard sizes — in stock

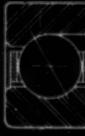
RADIAL BALL BEARINGS



Conrad design, types LC, HC and BLC



Maximum capacity design, types HM, BLM

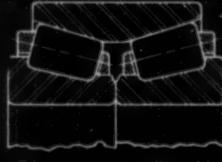


Angular contact design, types HA, BLA

TAPER ROLLER BEARINGS

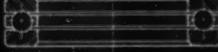


Single row type TS

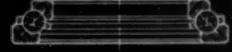


Two row, non-adjustable type TNA

THRUST BALL BEARINGS

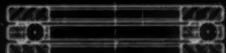


Grooved race type BT



Angular contact type BTA

Flat race type BTE



ECONOMICALLY SOLVED AT KAYDON

When bearing problems seem next to impossible — when design considerations appear insurmountable — it's time to call KAYDON.

You'll find KAYDON'S full-time, experienced bearing-design engineers can take your problem in hand — and take worries off your mind. Their

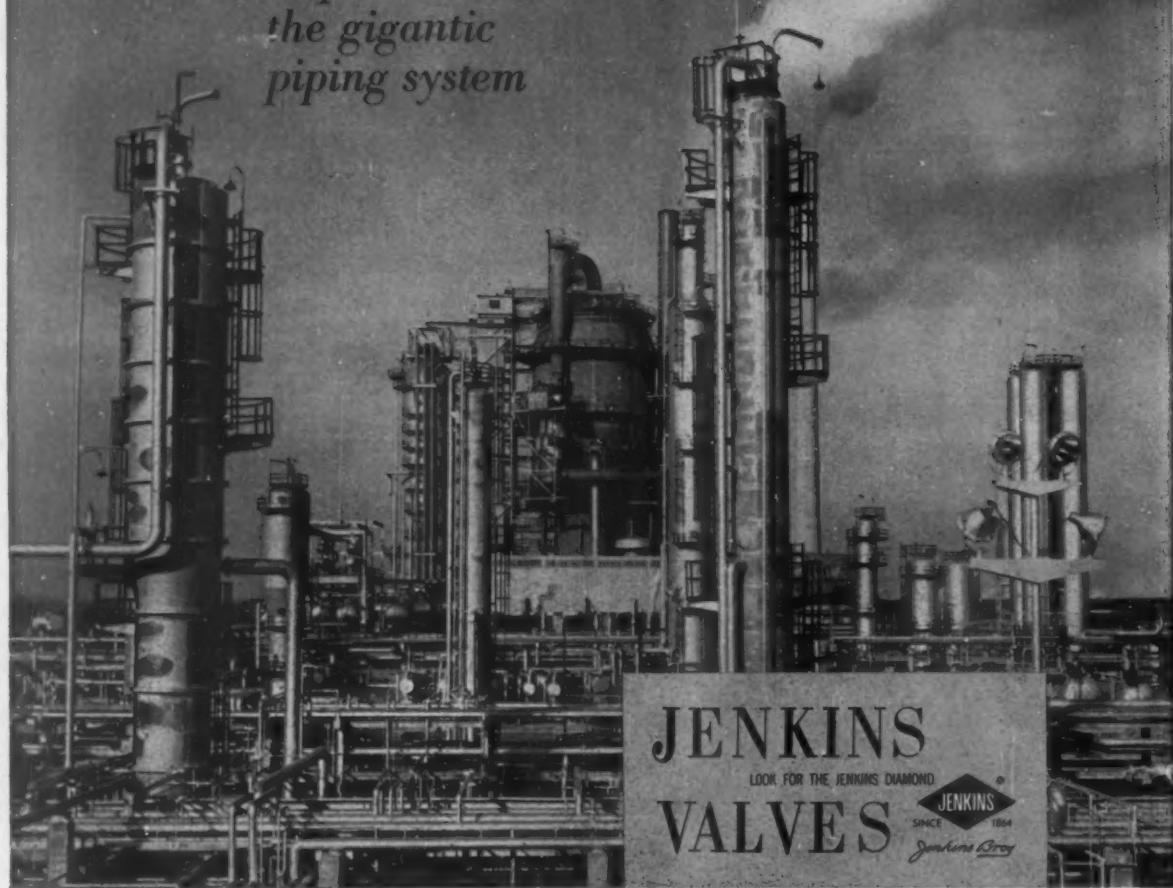
record is one of remarkable success — designing and producing bearings others said "couldn't be made."

Extraordinary bearing problems are KAYDON'S daily assignment. The tougher the better! If your designs require bearings of exceptional thrust or radial capacity, close-tolerance precision and/or "Real-Slim" section, or extra-large diameter bearings up to 130" O. D., call or write KAYDON for specific recommendations, economical solutions. You'll be glad you did.

THE **KAYDON**
MUSKEGON • MICHIGAN

ENGINEERING CORP.

At Tidewater's Refinery of the Future
JENKINS VALVES
*help control
the gigantic
piping system*



Primary Contractor: C. F. BRAUN & CO., ALHAMBRA, CAL.

JENKINS
LOOK FOR THE JENKINS DIAMOND
VALVES

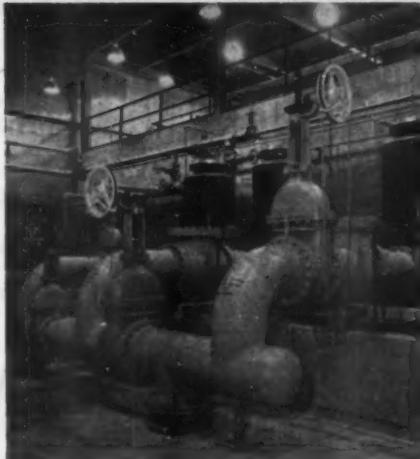


SOLD THROUGH LEADING DISTRIBUTORS EVERYWHERE

For the new Delaware Refinery of Tidewater Oil Company, careful selection of valves was unusually important. Tens of thousands of valves were required to control the maze of piping at this largest refinery ever built at one time.

To the valve specifiers for this gigantic piping project, the long record of Jenkins Valves for an extra-measure of efficient, economical service was good reason for using many thousands of Jenkins Valves in the total valve equipment of the refinery.

It will pay you to have the same important assurance when you specify or install valves . . . especially since Jenkins Valves cost no more. Jenkins Bros., 100 Park Avenue, New York 17.



These large valves made of Ni-Resist metal are among the thousands of Jenkins Valves in this great refinery. Sizes range from $\frac{1}{4}$ " to 24"; made of various metals to suit different services.

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
NOV. 2, 1957



Washington will make major decisions within the next 60 days.

Congress will be back in January. And that's when Eisenhower will spell out his program for the new year. Between now and then, the White House must make up its mind on many issues that will influence business. There's the matter of credit: easy or tight. There's the war threat in the Middle East. There are Russia's scientific gains. There's the matter of foreign aid and whether it should continue as a Washington dole or depend more and more on private investment. Then, there's domestic politics.

—•—
Take the business outlook first. The boom shows every sign of becoming tired. The official estimate is that business will now level out—run sidewise for a while, perhaps until late next summer or maybe until the fall. This was the Hot Springs appraisal of the Business Advisory Council—the group of business leaders who meet regularly with top government officials.

Note the hopes, as expressed by government officials and businessmen: The figuring is that, after eight to 10 months, things will liven up. Behind this is some economic figuring: Auto production and sales are supposed to be good next year (but industry men talk of 6-million cars, just about the level of this year). Homebuilding is supposed to rise, and so is the level of government spending on public works (which is counted on to offset the expected slide in business outlays for plant and equipment). What the experts call the economic ace-in-the-hole is consumer spending (it's supposed to turn up next year, despite the fact that unemployment may be rising).

When you think about it, the resumption of the uptrend depends on many "ifs."

Watch Washington's stand on credit. This can be the key to the trend over the next year or so—a major business factor.

The Federal Reserve Board attitude is that any return to "easy money" should await a further diminishing of inflationary forces. The Board will relax credit as slack develops in the economy. The question is "When?" On that, the board is silent—it follows a wait-and-watch policy.

Some advisers to Eisenhower advocate easier money now. They are not outspoken at this time. But there's no doubt that they now feel that the Reserve Board has held credit tight too long, with the risk that the easing in business might turn into a serious decline.

You will get the decision before long. Eisenhower can't spell out his business policies to Congress in January without some knowledge of what the Board plans for the next six months or so. And with the new consultant group operating within the White House—the Treasury Secretary, Reserve Board Chairman, and two top economic advisers—the President is in a position to know what's ahead on credit policy and to influence it.

—•—
There's the question of defense. Russia's gains in weapons have made this hot, politically. Sputnik came after the U.S.S.R. made her claims of an intercontinental ballistic missile.

The official line up to now has been that the U. S. is far superior to Russia in military strength. This may well be true for today. But the question raised by Russia's scientific progress is: "How will the two nations stand a year or two from now?" Many experts say that Russia will be ahead unless the U. S. gets out and hustles. That was the verdict of a secret meeting of

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
NOV. 2, 1957

scientists and defense leaders at Baltimore this week. You will hear more of this later, when Congress reconvenes.

Will defense spending take a sharp rise?

Odds are that it won't. There will be efforts to get more progress out of the funds already available. Cooperation in this field among the three armed services has been poor for a long time. Each service has pushed its new projects. Better coordination is in sight—more effective direction of the spending of money.

The new budget may call for extra money. This hasn't been settled and probably won't be settled until late December. Those who oppose new billions say they can't be spent efficiently, due to the limit on expert manpower. Advocates don't dispute this, but they argue it would be good propaganda, both at home and abroad. Aim would be to quiet criticisms.

—•—

Note the early start in the foreign aid fight. Congress next year will again have to O.K. funds to help our allies, both in NATO and in the so-called underdeveloped areas.

Vice-Pres. Nixon is running with this ball. His latest show was before the businessmen who met at Hot Springs. He plugged not only for grants of U.S. dollars abroad but also for private investments. On the latter, Nixon will support special tax benefits—lower tax rates on income from abroad than companies now have to pay on profits here at home.

—•—

As for general tax relief next year, chances are on the slim side.

There will be a political battle over cuts. Democrats will talk up relief for individuals, as a stimulant for consumer spending. But the fact is that any cut of consequence would put the government back into the red, would return the Treasury to deficit operations. At the Hot Springs business pow-wow, many company men talked about the desirability of lower tax rates. But nearly everyone agreed they would be impracticable next year. The feeling was that a cut should not be made at the expense of a balanced budget.

—•—

Next year's budget is taking shape—that's for fiscal 1959.

The Administration is split over what it should be. Some officials, including Commerce Secy. Weeks, would like to see a cut—from this year's estimated \$72-billion to \$70-billion. But there really isn't much thought that this will be done. You saw how Eisenhower at this week's press conference left the door open to a rise. He acknowledged that defense spending is on the rise and is hard to control.

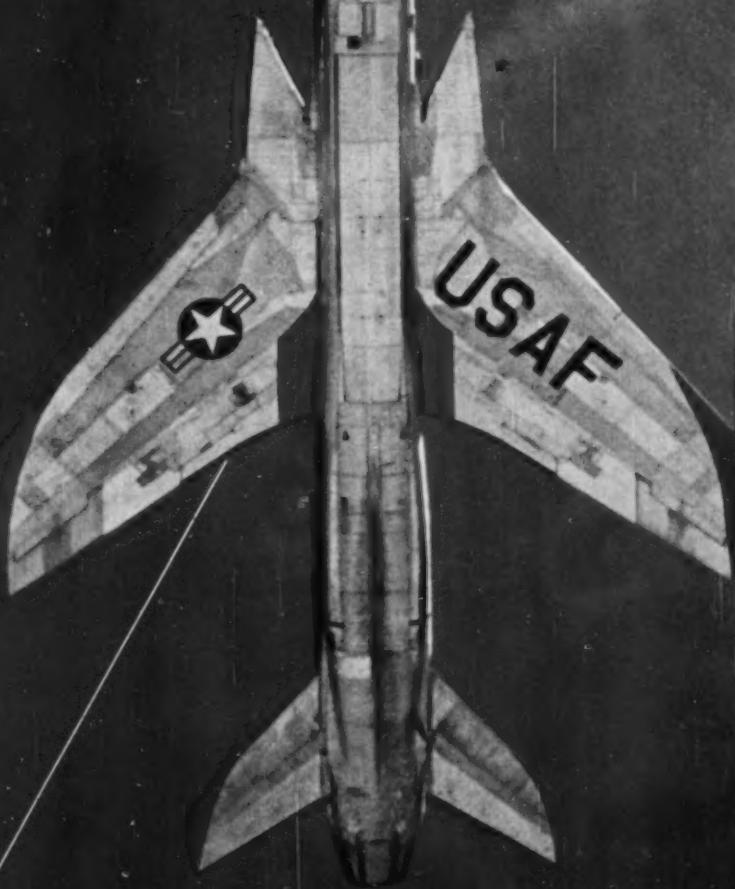
—•—

Eisenhower may ask a debt ceiling boost next year. He will be able to get by this winter (page 46), but it will be close. And being close makes it hard for the government to make the most of its advantages in the money markets. It's in the position of a poor man seeking credit.

Can the President get a higher ceiling? There's no certainty that he can. He will have to deal with Sen. Harry Byrd, chairman of the Senate Finance Committee. And Byrd feels that one way to force economy in government is to limit government borrowing. Byrd likens the economy problem to that of the spendthrift son—you can control him only by limiting both his allowance and his credit.

THE F-105

THUNDERCHIEF *



Official photograph

REPUBLIC AVIATION



Designers and Builders of the Long-range Thunder-Craft





Lumber supports us all

Planed down for a seesaw or formed to hold concrete. Quartered into railroad ties. Sawed into building frames. In one way or another lumber supports us all.

In turn, American commercial banks support lumber—an industry which has contributed handsomely to our country's rapid development.

Money, credit and other financial services supplied by commercial banks through the years are basic tools which help lumber, as well as other industries, to produce and distribute their expanding output. As a result, Americans today enjoy a living standard that is the envy of the world.

Chase Manhattan, a leader in commercial loans, is proud to be a part of this banking system which teams up with business and industry in furthering our country's dynamic economic progress.

THE
CHASE
MANHATTAN
BANK

MEMBER FEDERAL DEPOSIT INSURANCE CORP.



An acid-splashed Neoprene glove, a draftsman's pencil, a complex and angular pattern of a partially completed piping system are combined by Stanley Meitzoff to tell the exciting story of the progress and growth so evident in the chemical industry.

United Engineers has the know-how and experience needed to help plan and build today's most intricate chemical processing installations. As designers, construction engineers, and engineering consultants, we have served the leading companies of this giant industry on assignments of widest scope and variety. Each has presented its special problems —each has been successfully completed, on time and within the estimate.

Best evidence of the flexibility and depth of our

services—and of the satisfaction received—lies in our record of assignments from clients already served.

No matter what your project—processing plant or power plant, steel mill or industrial building, gas plant or pipeline—United Engineers has the know-how and creative ability to augment the engineering staff of your own organization.

Our background of more than 70 years' experience is your assurance of maximum return for each dollar expended. We invite you to share this experience.

UNITED ENGINEERS & Constructors Inc

U.E.&C. (Canada) Ltd.

New York 17 • PHILADELPHIA 5 • Chicago 2

Our list of clients includes many of the nation's forward-thinking industries and utilities

We now have five ways of viewing the national economy

1 National Income Accounts

Registers total value of finished goods produced and services performed (Gross National Product). Also the flow of income to individuals, business, and government.

Developed in 1930s by National Bureau of Economic Research (chiefly by Simon Kuznets) and Commerce Dept. (chiefly by Robert R. Nathan).

Published quarterly by National Income Div. of Commerce Dept.

2 Flow-of-Funds Statement

Shows the interchange of funds among various economic groups, and the use these groups make of their funds.

Developed in 1950s by Morris Copeland, of Cornell, and Federal Reserve Board economists (chiefly Ralph Young, Daniel Brill, and Stanley Sigel).

Published annually by Federal Reserve, which hopes soon to make the figures quarterly.

3 Input-Output Table

Traces purchases and sales of raw material, semifinished and finished goods, and services from one industry to another, in much greater detail than GNP or flow-of-funds statements.

Developed in late 1930s by Wassily Leontief of Harvard.

Data based on 1947 relationships for 200 industries published by the Bureau of Labor Statistics. Several foreign governments publish such tables annually.

4 Balance-of-Payments Table

Keeps track of the flow of goods, services, and capital between the U.S. and foreign countries.

Developed in modern form, from traditional trade data and international banking statistics, by John H. Williams of Harvard in 1921.

Published quarterly by Balance-of-Payments Div. of Commerce Dept.

5 National Balance Sheet

Shows value of tangible and intangible assets and liabilities and the net worth of the nation as a whole and of various economic groups: consumers, farmers, businesses, financial institutions, government units.

Developed in the 1950s by Raymond Goldsmith; now being expanded and improved by Goldsmith and National Bureau of Economic Research staff.

No current data published regularly.

Now the Trick Is to Blend Them

Economists use five different measures of the nation's economic activity, and each is useful in its way. But a committee of distinguished economists says the information would be more valuable if it could be standardized and harmonized.

The main use of economics is to make sense and order out of that vast, buzzing confusion known as the national economy.

For centuries, economists have been trying to explain the interactions of a nation's masses of people, buildings and machines, land and rivers and mines, money and other pieces of paper, techniques and ideas, business and social and political institutions. And they still find themselves either in a cloudland of theory or in a jungle of unrelated statistics about production, trade, prices, and financial conditions.

In the past few decades, however, economists have tried vigorously to build up accurate, detailed, and orderly accounting systems that would show realistically just where the economy stands at any time, how it is operating, and—if possible—where it is heading.

The five systems summarized above are the result of their efforts.

- **Incompatible**—Each of these systems developed independently to meet a special need; each reflects the insights and interests of its creators. Each to some extent overlaps others, though not so much as it seems to. Their underlying concepts are different and data are likely to differ, even when they supposedly represent the same thing in different systems.

Some of these differences can be reconciled only by the most tortuous operations, known only to the statistical high priests in government and a few research centers.

To comb out these snarls and improve the structure, accuracy, timeliness, and usefulness of the nation's accounts, the Bureau of the Budget last year initiated a thorough study, in be-

half of all the government agencies involved in producing and using the statistics. It commissioned the National Bureau of Economic Research, a private nonprofit group, to study the five systems and recommend improvements.

Last week, the National Bureau made its report to the Senate-House Subcommittee on Economic Statistics, headed by Rep. Richard Bolling (D-Mo.).

- **Super-System**—The National Bureau itself played a key role in developing the best-known, most widely used of the five measurements—gross national product or, as economists like to call it, "the national income and product accounts." It had a hand in the development of others. Raymond W. Goldsmith, who drew up the newest set of accounts, the national balance sheet, is chairman of the committee of top-notch economists assembled by the National Bureau to carry out Budget's contract.

The chief recommendation of the Goldsmith report sets up a job for economists that will keep them busy for at least five years and, according to Solomon Fabricant, the National Bureau's

You Apply It FAST!

and it cuts costs!



ZONATILE® is the All-In-One Roof Slab!

INSULATING Pre-cast Zonatile, made with Zonolite vermiculite aggregate, provides both insulation and structural strength.

PERMANENT Zonatile is rotproof. Even chemical fumes cannot harm it.

100% FIREPROOF Neither ingredient—Portland cement or vermiculite aggregate—can burn.

YET LIGHTWEIGHT Only 10½ lbs. per square foot. Easy for 1 man to handle. Easily sawed and fitted.

Made from Miracle Mineral VERMICULITE

Zonatile slabs (18" x 36" x 3") go in place easily, quickly—form the ideal roof deck that provides fire safety, built-in insulation all in one application.

Write for FREE BOOKLET

thousands of feet already in use.
Mail coupon today for free booklet



ZONOLITE
COMPANY
135 South LaSalle St.
Chicago 3, Ill.

ZONOLITE COMPANY, DEPT. BW-117
135 South LaSalle St., Chicago 3, Ill.

Send me free booklet G-50 about low cost Zonatile roof slabs.

Name.....

Firm.....

Address.....

City..... Zone..... State.....

"... crisis is almost invariably the mother of economic invention . . ."

STORY starts on p. 61

research director, "probably for the next 20 years." This task: to integrate all five systems into a single system of national accounts.

This integration, Goldsmith told the subcommittee, "is the most important long-range objective in this field." To see why, you must recall how the various existing systems work and what they are meant to do.

• **Businesslike Idea**—In each of their analytical systems, economists adopted one of the great and simple ideas that helped bring order into the modern business and industrial world: double-entry bookkeeping.

By regarding all economic activity from two opposite and balancing viewpoints—debits against credits—economists saw that they could get a detailed and consistent picture of an exceedingly complex operation, with a means of recording changes in either the whole structure or its parts.

• **Balance of Payments**—One of the oldest "balance" concepts—going back to the 17th Century mercantilists—had been the "balance of trade," comparing exports with imports. This balance was considered "favorable" if exports exceeded imports, "unfavorable" if the other way round.

With this concept widely used, it was probably inevitable that the first modern, sophisticated approach to keeping books on a nation's business should come in the area of foreign trade. This was the "balance of payments," based not only on movements of exports and imports but also on such invisibles as capital flows and payments for freight and insurance.

Prof. John H. Williams of Harvard did the pioneering work on balance of payments in 1921. Its timing and its spread to other countries were no accident.

In the wake of World War I, governments were struggling with problems of reparations payments, international loans, and all the complexities of rebuilding an orderly system of exchange rates. Crisis is almost invariably the mother of economic invention. Work to develop better balance-of-payments statements was spurred again by the mess in international trade and finances that followed World War II.

Strictly speaking, this kind of statement isn't quite analogous to either of the major statistical reports that are most familiar to businessmen: the balance sheet and the profit-and-loss statement. Rather, as Geoffrey Crow-

"Look-
HOW THIS ONE MACHINE
CUT COSTS IN
SO MANY PLACES"



"Remember when we approved purchase of a Wheelabrator for our cleaning room? Well, our cost records show the machine has paid for itself out of savings in less than a year. Besides this, it's paid off in better cleaning, saved time in machining, lengthened tool life, improved the appearance of our products and made our customers a lot happier. These things don't show up in this chart, but they help our profit picture, too."

See how Wheelabrator equipment can help your profit picture. Send today for Bulletin 74-C. WHEELABRATOR CORPORATION, 461 S. Byrkit St., Mishawaka, Indiana.

WHEELABRATOR®
Airless BLAST CLEANING

ther, former editor of the London Economist and a former balance-of-payments specialist, has said: "It is much more in the nature of a cash account or day ledger."

It records all transactions that a country has had with the rest of the world—all payments by or to the country, whether capital or current. In one respect, however, it's just like a corporate balance sheet: It has to balance. Says Crowther: "If the figures don't naturally come out that way, you have to cook them until they do." Every nation's balance-of-payments statement includes "fudge factors" to make it come out right.

• **Gross National Product**—The balance-of-payments statement covers only one small part of a nation's total economic activity: its international operations and exchanges. So the first truly grand design for recording and organizing data on the nation's economic life is the measure of gross national product.

GNP was fathered by Simon Kuznets in 1932, at the bottom of the Depression. Its time of greatest development came just before and during World War II, when it became, in the hands of Robert R. Nathan and others, a strategic weapon for planning and directing war mobilization and production.

Many students of the period consider this new set of national accounts a major factor in the tremendously effective economic performance of the U.S. during the war, in contrast to the showing by our enemies. They say victory went to the side that did the superior job of boosting output and focusing resources on the war effort.

• **What It Is**—GNP closely resembles one of the businessman's favorite exercises in arithmetic: the profit-and-loss statement, which shows total value of sales, minus cost of the goods that are sold, with a remainder divided between profits and taxes. The costs, the profits, the taxes all are forms of income to someone else, including government.

So it is with GNP accounts—total value of production equals total income received. GNP shows the total spending that everyone—consumers, business, and government—does on consumption, domestic and foreign investment, and taxes. Thus it provides three statistics: the value produced, the incomes earned, and the spending done. It gives a picture of what is happening in the mainstream of the economy.

• **What It Isn't**—But the picture is far from complete, because it counts only the value of finished products.

For example, GNP includes the price finally paid for, say, a loaf of bread, but it doesn't show all the payments and receipts made along the way from farm to consumer, or the value of the

service operations en route. It doesn't show where all the stuff in the loaf of bread (or the wrapping paper around it) came from or where the loaf of bread goes.

Nor does GNP show several other kinds of economic activity, such as the exchange of used cars, houses, pieces of land, stocks, bonds, mortgages and other credit instruments. Finally, it doesn't tell you the assets and liabilities, the stock of wealth and of debts, of each sector of the economy at a given time, or how they differ from previous years.

• **Three New Systems**—The effort to fill these gaps in economic knowledge gave rise to the three newer systems of national accounts:

Input-output (BW—Aug. 4'55, p45) was designed by Wassily Leontief of Harvard to show how goods and services flow this way and that among the nation's industries. Essentially, it is a vast elaboration of the detail behind GNP, the consolidated account of production. Its greatest value is as a guide to allocating production needs among all industries so as to achieve some goal of national policy, such as national defense.

Flow-of-funds (BW—Oct. 29'55, p70) was worked out by Morris Copeland of Cornell to keep track of the movement of money and credit among all major sectors of the economy, resulting from transactions in new goods and services, secondhand goods, or ownership rights. Flow-of-funds tables are basically like the businessman's statement of sources and uses of funds. They are especially valuable to the Federal Reserve, which draws them up, to trace all changes that bear on the nation's financial affairs.

National balance sheets were devised by Raymond Goldsmith to measure the economy's assets and liabilities, both tangible and intangible. They are the exact counterpart of the familiar corporate balance sheet. For economists, they have great value in improving and understanding of ratios between capital and output and the relations between capital stock and economic growth.

• **Put Them All Together**—The National Bureau's report holds promise of an enormous gain to business and government analysts and policymakers if all these different systems can be integrated, conceptually and statistically.

The committee of economists recommends that the integration be accomplished gradually, that it aim first at standardizing definitions, classifications, and valuations.

Some of the system-builders, especially Leontief and the Fed, aren't likely to take kindly to the report. They may regard it as biased in favor of GNP measurement and the National Income Div. of Commerce Dept.

"We don't ignore the fact that integration will take time and will jolt

Straits Tin Report

New developments in the production, marketing and uses of tin



Over one-third of the world's tin comes from the Federation of Malaya. Called Straits Tin, it is at least 99.87% pure and is famous for its absolute reliability of grade.

Just how dependable is the supply of Straits Tin? It's more dependable than the supply of manganese, for instance; just as dependable as the supply of any other imported metal; and more dependable than the supply of some kindred domestic metals.

Just how adequate are Malaya's tin ore reserves? There's just as much unmined ore as has been mined since prehistoric times, according to an official and authoritative assessment.

What assurance of a fair and reasonable price do U.S. tin consumers have? The International Tin Agreement, now in operation, is designed to provide that assurance. The agreement is operated by a council representing 14 tin-consuming and 6 tin-producing countries. The consuming group must approve everything proposed by the producing group.

What research is being performed to find new metallurgical and chemical uses for tin? Since its establishment in 1932, the Tin Research Institute has developed more new uses and applications of tin than were found in the preceding 50 centuries.

Why use tin instead of other materials? Because tin has unique properties that make it better than other materials. The salient fact about the search for substitutes for tin is that millions of research dollars have been spent without finding anything better for various uses, or even as good, while the research dollars spent on new uses for tin have paid rich dividends.



Ask us to send you TIN NEWS, a monthly letter. It will keep you posted on tin supply, prices, new uses and applications.

The Malayan Tin Bureau
Dept. 441, 1028 Connecticut Ave., Washington 6, D.C.



OFFICE FURNITURE

of Lasting Quality



Most popular . . . ASE desk with steel arched legs and posture swivel chair. Desks come in smart, new finishes . . . with choice of tops, bases and styledge moldings. Matching chairs in a variety of attractive fabrics. ASE office furniture is versatile . . . serves in all departments and in any type of office from shipping clerk to chairman of the board.

Invest in ASE . . . the quality line of office furniture.



**Better Built for
Better Business**

Secretaries love the superiority of ASE desks. They like the firm, sound-deadened typewriter platform . . . easy drawer action . . . protective styledge molding . . . finished hidden surfaces that can't scuff shoes, snag nylons or impair their appearance.

A COMPLETE LINE OF
DESKS • CHAIRS • L-UNITS • CREDENZAS • TABLES
BOOKCASES • FILING CABINETS • STORAGE CABINETS



THERE'S AN ASE DEALER NEAR YOU

ALL-STEEL EQUIPMENT INC.
AURORA, ILLINOIS

some established practices and conventions," says Goldsmith. But he urges the necessity for integration in order to provide better data with less confusion and less cost. Only an integrated system, he says, will enable economists to take full advantage of high-speed electronic computers in analyzing the national economy.

• **More Speed, More Budget**—The National Bureau's report also urges other improvements in the government's statistical output. Especially it wants better statistics more quickly. It points out several weak spots: inventories, savings, price adjustments for various elements of GNP, consumer durables, profits of both corporate and noncorporate businesses, productivity, capital investments by government, and depreciation.

And the report bemoans the cutting of the budget for the government's chief center of national accounting work, the National Income Div. This unit of the Commerce Dept. appears to have provided the reverse of Parkinson's Law by suffering a 25% reduction in its staff since 1950 while the number and range of its duties have continued to expand.

Business users of national accounting figures may be surprised to learn that National Income Div. has a staff of only 39 (including only 22 professional economists and statisticians), working on an annual budget of \$242,835. Seven years ago, it had a staff of 48, including 32 professionals, and a budget of \$241,440 in dollars that bought more.

The National Bureau report puts no price tag on what its recommendations would cost, but it makes a case for a sizable boost in government spending in order to get better statistics.

• **Bit by Bit**—Members and staff economists of the Joint Economic Committee say they regard the report as a policy document, not an operating manual, and they think it may take five years or more to carry out the recommendations. Staff men say they would be very surprised to see the Administration offer the whole package of legislative recommendations next year. Rather, they expect the proposals to come up one or two at a time.

Nevertheless, economists inside and outside the government will regard the National Bureau's report as a landmark in the process of consolidating the brilliant economic and statistical innovation of the last 25 years. Reflecting the nation's new post-Sputnik mood, Goldsmith told the congressmen: "Taking everything together, the U.S. probably still leads the world in the field of national accounting, but the margin has become much narrower during the last decade. We must now make a considerable effort to keep our lead. If this be jingoism, make the most of it." **END**



Executive decision at Bear Ranch Creek

...2293 MILES WEST OF CHICAGO

It came to him as the train glided past

Bear Ranch Creek — the answer that had eluded him so long.

Why, after weeks of worry and frustration, was this

company president able to solve his problem as he rode through
Feather River Canyon, many miles from his office?

He had slept well, he was rested and relaxed. He had enjoyed his
meals in the diner. Congenial chats with friendly people met in
the Lounge Car had been stimulating. And although he had
spent hours of pleasant relaxation in the Vista-Dome as the
California Zephyr unfolded its scenic wonders, he had also
found time to put in a lot of work in the privacy of his compartment.

Uninterrupted by demanding telephones and petty office details,
nervous tension had vanished and he was able to think creatively and plan ahead.

Reflecting on these matters he makes another decision:

all the executives in his firm will be encouraged to



take the time to take the train!

WESTERN PACIFIC

ROUTE OF THE VISTA-DOME *California Zephyr*

SAN FRANCISCO TO CHICAGO VIA WP, D&RGW AND CB&Q



NAMES & FACES

Businessman in the State House—

A Governor's Scrapbook Is a Tipoff to the Job



NATIONAL AFFAIRS: Gov. Hodges (second from left) and other Southern governors confer with Pres. Eisenhower on Little Rock desegregation problem.



POLITICKING: Hodges signs hundreds of autographs during 1956 election campaign.



TRAVELER: Hodges completes a flying tour in a National Guard jet plane.



PUBLIC OCCASIONS: Hodges and Mrs. Hodges are prerequisites for state doings—they participate in everything from laying cornerstones to greeting important visitors.



PUBLICITY: Hodges has a constant stream of visitors with ideas to sell or charities to publicize. Here, he makes his contribution to a worthy cause.



SPEECH MAKING: Hodges makes more than 200 speeches a year.

Gov. Luther Hodges



CONVENTION: Hodges, who played an important role at the Democratic National Convention last year, huddles with Gov. Frank Clement of Tennessee.



INAUGURATION: Hodges learns early in the game that governorship is an over-time job more demanding than business.



MINUTE MAN: Hodges takes over in emergencies. Here he inspects the damage from a hurricane that vented its wrath on the Carolina coast.



North Carolina's Governor (at press conference above) brings to the job a keen understanding of his state's economic problems, but he sometimes goes astray in the political jungle.

Gov. Luther H. Hodges of North Carolina to all outward appearances (pictures at left) carries easily the external trappings of the politician.

His lips automatically pucker up whenever a baby waddles into sight, his handshaking muscles have developed unusual strength and stamina, and his mind has become a Univac filled with people's names.

Yet appearances can be deceiving, for Luther Hartwell Hodges is a businessman turned politician, and the transition is only five years old (BW—Sep. 13'52, p76). In 1952, unsupported and unwanted by the state's Democratic organization, Hodges campaigned on his own for lieutenant-governor and surprised everyone by winning the nomination, making him a shoo-in for the post. In November, 1954, upon the death of Gov. William B. Umstead, Hodges became governor; in 1956, he won a four-year term of his own.

• **Achievements**—By most standard yardsticks, Hodges has done well since trading in his businessman's hat for the politician's.

• At the state level, he won his election in 1956 by a record vote. As governor, Hodges has spearheaded an impressive amount of legislation, much of it devoted to putting state government operations on a more businesslike basis, and to attracting new industry to the state.

• On the regional level, he has served as chairman of the Southern Governors Conference, and was recently chosen chairman of the Southern Re-

now

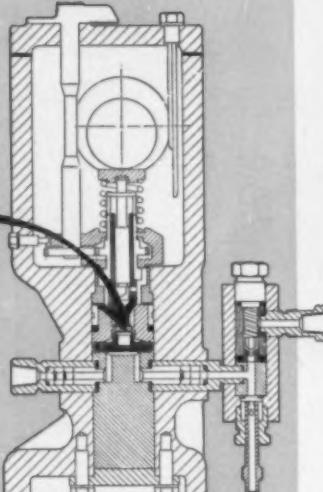
**pump... meter... proportion
exact fluid quantities
over extended periods of time!**

New McCannameter Diaphragm Pump* delivers exact amounts of fluids for any length of time. Pumps at pressures up to 2500 psi without staging. Operates at speeds up to 900 strokes per minute and flows up to 6 GPH.

new!

New Teflon-faced diaphragm permanently bonded to elastomeric backing provides chemical resistance, exceptionally long life. Packless design, positive displacement encapsulated construction, lifelong lubrication, no fluid contact with frictional moving parts—these and many other features add up to new performance highs, new low cost!

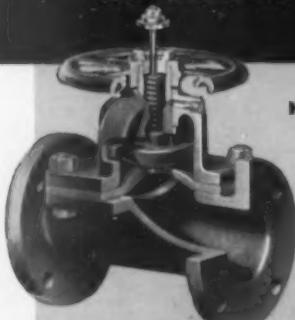
Write today for bulletin #301 describing and illustrating this completely new McCannameter Diaphragm Pump.*



*Pat. Appl. for.

hills- mc canna company

THE PEOPLE WHO KNOW AND CONTROL FLOW



LEAK TIGHT FLOW CONTROL HILLS-MCCANNA DIAPHRAGM VALVES

Positive flow control for all air, water, liquids, slurries, gases and corrosive services! Exclusive sealing bead diaphragm . . . simplified low-cost, in-line maintenance.

Write for 12-page catalog #104.

HILLS-MCCANNA COMPANY,
2381 W. Nelson St., Chicago 18, Illinois



PHONE CALLS keep Hodges busy at the office. He does his paperwork at home.

gional Education Board, which strives to make best use of the region's university facilities.

• On the national political level, Hodges was a key figure at the Democratic national convention last year.

• On the national affairs level, Hodges is serving as chairman of the group of Southern governors that recently met with Pres. Eisenhower to try to work out a solution to the Little Rock desegregation impasse.

• **Difficult Transition**—Obviously after five years experience, Hodges is no longer a babe in the political woods. He has taken the plunge and learned to swim in the political streams—but at considerable cost. The transition from a 30-year career in the business world to the political world has not come easily. The Governor has learned that for every asset a businessman brings to politics he also brings a fair share of liabilities.

I. Textile Man

Hodges' business career has always been linked to the textile industry. He started as mill hand and office boy at Fieldcrest Mills, the manufacturing subsidiary of Marshall Field & Co., Chicago-based retailer. Working at the Leaksville (N. C.) plant, Hodges rapidly moved up the ladder: from personnel manager (1920) to vice-president of Marshall Field (1943).

In 1950, at the age of 52, he decided to retire from Field, devote his time to public service. His first try was a two-year hitch as chief of industry in West Germany under the Economic Cooperation Administration.

• **Important Decision**—A year later,



Nobody lost . . . Nobody won, either . . .

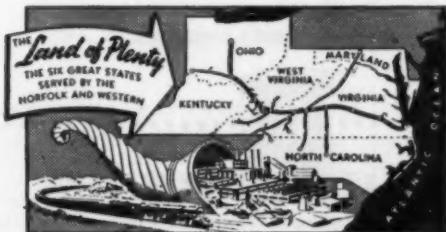
In business, there's no profit in breaking even. That's like a tie game of tic-tac-toe.

If you're looking for a new plant site, you don't want something "just as good" as your competitor — you want something *better*. The plant that's located better than competition's has an advantage that's hard to overcome — a "head start" that helps you stay ahead. And if you want this built-in advantage, you should check *The Land of Plenty*. It's easy to do — because the Norfolk and Western's plant location specialists will do it for you, without obligation and in confidence.

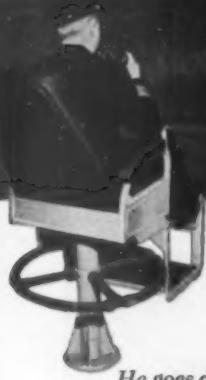
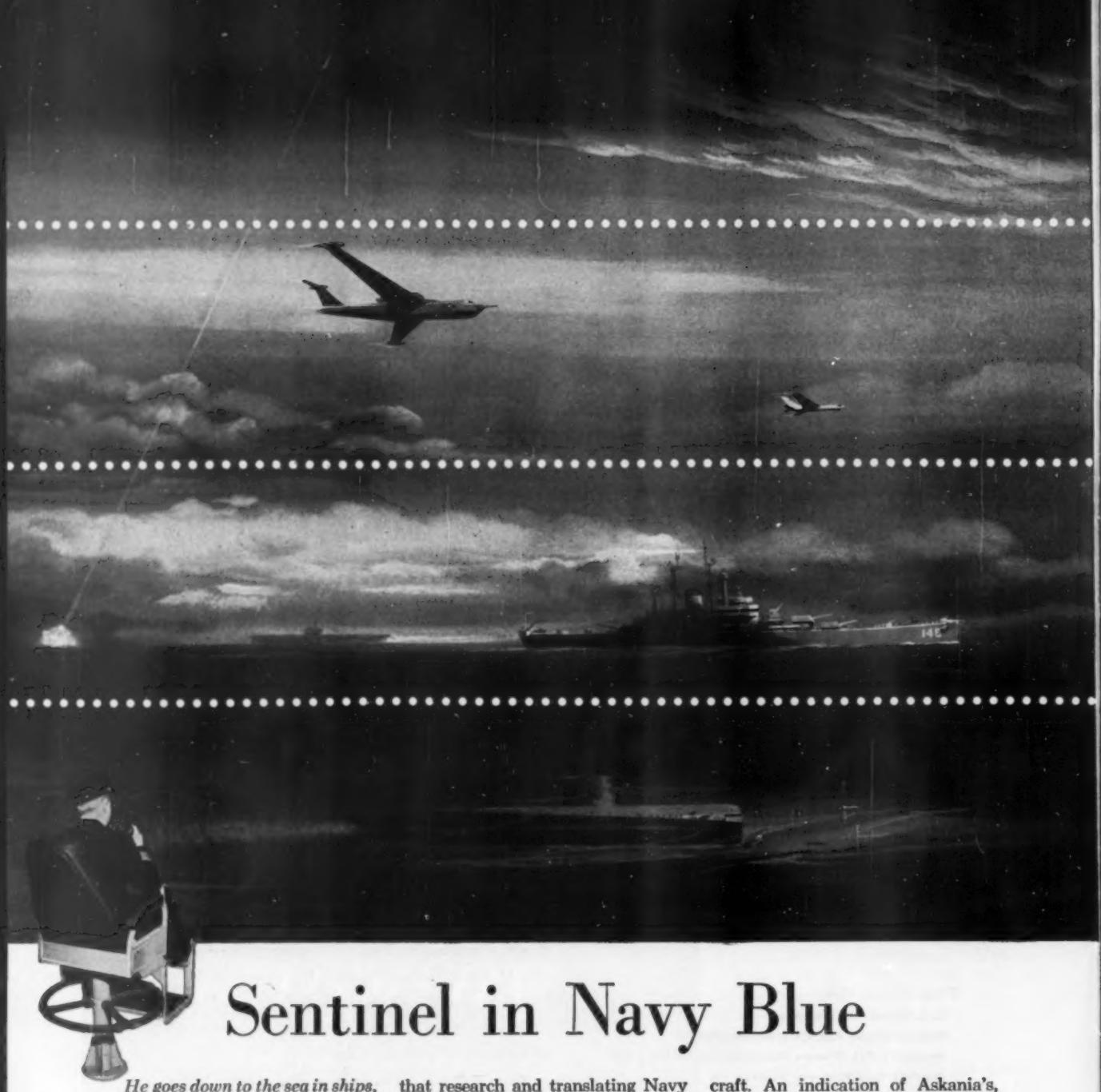
Get in touch with them — the service they give you may lead you to a permanent way of staying ahead.

Write, Wire or Call:

L. E. Ward, Jr., Manager
Industrial and Agricultural Department
Drawer B-781 (Phone Diamond 4-1451, Ext. 474)
Norfolk and Western Railway
Roanoke, Virginia



Norfolk and Western
RAILWAY



Sentinel in Navy Blue

*He goes down to the sea in ships,
does business in great waters.*

But no longer is the Navy confined to the sea's surface. It plumbs the depths, ranges through the skies, penetrates outer space. Its laboratories, even a thousand miles inland, are nautical battle stations.

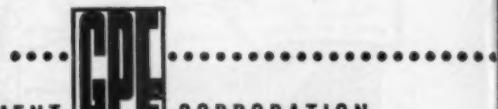
Research by the Navy, and by the industries which serve it, anticipates tomorrow's needs. Among the industrial leaders contributing to

that research and translating Navy needs into production realities, are eight companies of the GPE Group.

Typical of the significant contributions by GPE companies are Librascope's computers and anti-submarine devices . . . GPL's automatic bombing and self-contained navigation system for the Martin Seamaster . . . Griscom-Russell distillation equipment on every class of ship including nuclear powered

craft. An indication of Askania's, Kearfott's and Link Aviation's involvement is given in the adjoining column.

Many GPE Group products serve vital defense needs today. The scientific advances they embody will one day benefit everyone.



GENERAL PRECISION EQUIPMENT CORPORATION

PRINCIPAL PRODUCING COMPANIES • Askania Regulator • GPL • Graflex • Griscom-Russell
Hertner Electric • Kearfott • Librascope • Link Aviation • Pleasantville Instrument • Precision Technology • Shand and Jurs • Simplex Equipment • Strong Electric



praenuntius futuri



"Portrait of The Future" is the well-chosen motto of this submarine. States U. S. Naval Institute Proceedings: "The Albacore will long be remembered as the pioneer design for flying under water." Albacore's revolutionary piloting technique was conceived and produced by Askania, a GPE company.



Link Aviation provides still another glimpse into the future with its F-11-F Flight Simulator in which pilots of the supersonic Tiger pre-experience flight conditions and maneuvers, "log" priceless familiarization time. Also "shipping out" with the Navy Air Arm is Kefratt, providing 400-cycle components for both planes and guided missiles.

The coordinated resources of the companies of the GPE Group, so effective in anticipating and meeting the needs of the Navy, serve with equal effectiveness other fields such as:

Automatic Controls and Instrumentation
Aviation
Chemical and Petroleum
Marine
Motion Picture and Television
Paper, Printing and Textile
Power Generation and Conversion
Steel, Mining, Transportation

For brochure describing the work of The GPE Group, write to: **GENERAL PRECISION EQUIPMENT CORPORATION**, 92 Gold Street, New York 38, New York.



MEETINGS with staff members and legislators occupy a lot of Hodges' time.

Hodges went back home to Leaksville. He had no definite plans, but he had a theory. During his tours of government duty, he had been impressed by the tremendous amounts of money handled by all levels of government. He also had seen some of the complicated administrative problems a government runs up against. Some of the money had been wasted, some of the problems bungled. What government needed, Hodges decided, was more businessmen.

So when a friend suggested that he run for lieutenant-governor, Hodges took the suggestion seriously.

II. The Governor's Day

The Governor finds life at the capitol in Raleigh more demanding, time-consuming, and filled with more complex problems than he faced as general manager of a textile empire.

• **Daily Grind**—Hodges' day begins at 7 a.m. with a cup of coffee in the governor's mansion, a few blocks from his office. Before going to work at 9 a.m., he does a sizable amount of dictation at home, because a constant stream of visitors to his office makes it impossible to use office time for such chores.

During his office hours—usually 9 a.m. to 6 p.m.—the Governor's time is filled with meetings with his staff, with department heads, legislators, politicians, businessmen, and with visiting national dignitaries. When the General Assembly is in session, Hodges has as many as 45 to 60 visitors a day.

At lunch-time and dinner, he goes to the mansion—but he rarely leaves off business. For over half of his weekday meals, the Governor brings guests home.

• **Night Work**—The Governor's nights likewise are busy. Many are spent attending dinners and formal affairs. And when he stays at home, he usually spends hours pouring through his work

"box" answering letters. Of the 100 or so letters he brings home nightly, he usually answers 30 personally, routes the rest for his staff (two men and 10 women) to handle. He also takes home special reports, which he stocks up for weekends or a light day.

The Governor also finds himself busy on the phone at night. He will accept any call from his staff or a legislator.

All this is a far cry from his office routine at Fieldcrest. There, he did his dictation and business reading at his desk, and he usually took leave of the office and his business problems at 5.

• **Familiar Face, Voice**—Being governor has also meant putting his life in a goldfish bowl. The Governor's face is so familiar, through television appearances and newspaper pictures, that there's hardly a place in the state he can go without being recognized.

This goldfish bowl existence also includes being present at a staggering array of functions such as plant openings, dinners, political rallies, and football games.

The Governor tends to be the man in the state most asked to make speeches. Hodges makes around 200 a year. Most are prepared beforehand, and are of considerable length, a far cry from his usual business world speechmaking of off-the-cuff sales pep talks.

• **Little Relaxation**—The Governor's job provides little time for socializing or relaxation. Hodges tries to take off one day every other week, spend a long weekend hunting quail or duck shooting. His vacations are usually taken in two- or three-day snatches. In the winters, though, he gets off to Florida for a week to 10 days.

The Governor's family life has changed too. His limited time—as well as geography—makes it difficult for the Governor and Mrs. Hodges to visit their two out-of-state married daughters. The Hodges' son, a senior at the University of North Carolina, has always been shy

CLOSED-CIRCUIT TV in action

See how businessmen are solving tough problems
visually—with GPL *ii-TV*®



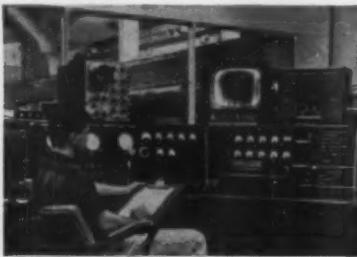
Quick record reference via *ii-TV* permits concentration of records in one area, saves this user \$30,000 a year. GPL system is simple enough for anyone to operate.



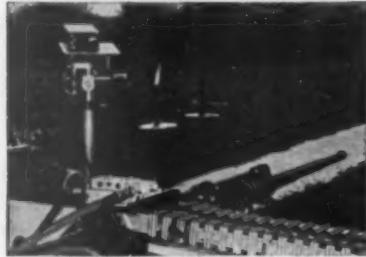
Hard-to-see actions, as in the bouncing under-chassis of GM cars in road test, above, can now be viewed. Standard GPL TV camera takes hard knocks in stride.



Monitoring distant meter saves this manufacturer substantial sums in electric bills by avoiding peak loads. Reliable, remotely located TV camera by GPL needs no tending.



Observer is safe when dangerous operations, like this one involving radiation at Brookhaven National Laboratory, are seen through sharp pictures of GPL camera.



Even bone-shattering concussions can't disturb perfect pictures of GPL's Ruggedized camera, designed specifically for most severe applications.



Basic *ii-TV* system is finest, most dependable; costs less than medium-priced car. Mobile GPL TV Projector gives wall-size pictures 300% brighter than any other.

SEE ***ii-TV*** * FOR YOURSELF

For further details, or demonstration of this precision-engineered system in your own office or plant by local GPL representative, write on your letterhead to Mr. N. M. Marshall, Sales Manager, General Precision Laboratory Incorporated, 61 Bedford Road, Pleasantville, N. Y.

*GPL's industrial-institutional TV system.



General Precision Laboratory Incorporated



EX-BUSINESSMAN Wm. Saunders heads Dept. of Conservation & Development.

at visiting his parents at the mansion. On his first visit there, he had to ask a Raleigh traffic cop for directions.

III. The Asset Side

Probably the most striking asset Hodges has brought to the governor's job is a keen awareness of the state's economic problems and possible ways to solve them.

To understand these problems, it's necessary to look at the state's economic picture.

Although North Carolina ranks as the South's No. 1 industrial state, the truth is that the state has been going through the economic wringer.

• **Farm Problem**—For example, in terms of agriculture, North Carolina has the nation's biggest farm population (1.4-million), the second largest number of farms. Yet it suffers from too many people seeking to make a living on farms that are too small, under-capitalized, and under-mechanized. Besides, more than half the state's farm income is produced on the tobacco patch, a crop often wasteful of land and labor, and not particularly profitable.

As a result, North Carolina farmers are low-income earners, usually have to supplement their farm income by industrial jobs. Some reach the point where they leave the state looking for something better.

• **Industrial Picture**—The state's industrial picture also has a dark smudge. North Carolina's growth has been built on three giant natural resources, cotton, tobacco, and trees; yet these are traditionally low-skill, low-pay industries. This is a major reason why North Carolina has slipped to 48th place in average weekly earnings by industrial workers.

• **Governor's Program**—Hodges was



Laboratory photo of Aircomatic® arc welding equipment in action.



Air Reduction uses the Graphic* to copy a graph for use as a lantern slide.



Pacemaker Graphic photographs a special, machine-shop-made camera which achieves up to four times magnification. Camera uses 42" long extension tube, Graflex-made Graflok® Back, 4" x 5" Graphic sheet film holders, Graflex "22" roll film holder and Graflok flash equipment. Designed to photograph small objects such as welding arcs.



Close-up of welding arc made with special camera using Graflex* and Graphic components.

PACEMAKER **GRAPHIC** USED AS RESEARCH TOOL by AIR REDUCTION COMPANY

Continuing investigation in the field of arc welding is a prime function of Air Reduction's research laboratories at Murray Hill, N. J. Here, photography—Pacemaker Graphic* photography—plays a big part in the improvement of arc welding methods and equipment so that industry may fabricate, join and repair all types of metal more quickly and economically.

Air Reduction uses the 4 x 5 Pacemaker Graphic literally as a tool of research. Pictures of equipment and various types of specimens, macro-photographs, welding arc photos and exploded view shots aid scientists to evaluate methods and equipment, detect weaknesses in processes and solve difficult arc welding problems.

Air Reduction's Graphic-equipped photographic staff not only provides picture service for the entire Air Reduction research laboratories but performs special assignments for various operating divisions of the company, when required.

*Trade Marks

If you'd like to know the many ways Graflex-made Speed Graphic cameras can serve YOU, write on your own letterhead to Dept. BW-2, Graflex, Inc., Rochester 3, N. Y., for our free brochure on money-saving uses of Graflex cameras in industry.



GRAFLEX®

Price-Winning Cameras

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION



70th Anniversary—1887-1957

AIR MOVING PROBLEMS? HERE IS YOUR ANSWER!



From aircraft to air conditioning—heating and ventilating to electronic controls and instrumentation—no matter what branch of industry you are in, Torrington has the answer to your air moving problems.

Among the users today of Torrington air impellers are literally all of the major producers in the air moving industries... plus many more whose products involve specialized problems of cooling, heating and ventilating. If you have such problems, *talk to Torrington!*

THE TORRINGTON MANUFACTURING COMPANY
TORRINGTON, CONNECTICUT • VAN NUYS, CALIFORNIA • OAKVILLE, ONTARIO



GOVERNOR CONFERs often with legislators. Here he talks with B. T. Falls.

quick to see these problems. His program calls for:

- Bringing more industry into the state, especially more diversified industry and plants that require higher skills and pay higher wages.

- Distributing industry more evenly through the state. Right now, 50% of North Carolina's industry is located in 10 of its 100 counties.

- Encouraging local industries to process the state's natural resources, rather than ship them out-of-state for processing.

- Cashing in on the state's assets: surplus industrial labor, good climate, transportation, nearness to market, and pleasant living conditions.

- Special Agencies—Hodges' efforts took several forms. To encourage development of native industry and native resources, the Governor spearheaded establishment of the North Carolina Business Development Corp. with assets of \$10-million, which makes capital available—where bank money is not—for such purposes.

The major effort to get new industry from outside is made through the Dept. of Conservation & Development. It spends \$150,000 annually in advertising the state's industrial potential.

In addition, the Governor and many North Carolina businessmen do personal contact work. Hodges finds it quite easy to talk turkey with other businessmen.

- New Attractions—Two new assets the Governor uses convincing businessmen of the desirability of locating in North Carolina are the state's new tax bill and the Research Triangle concept.

Aware that industries were turning thumbs down on locating plants in North Carolina, Hodges pushed for a tax commission study to determine whether inequities in the state's tax

Goodrich-Gulf Chemicals, Inc.

Ameripol
RUBBER



The bounce of various rubber specimens
being tested at Goodrich-Gulf laboratory.

the way
the ball
bounces

KNOWING the behavior of man-made rubber—the way the tire will wear or the ball will bounce—is second nature to our research and development men. The experience of our people in rubber, which goes back over three decades, has yielded improved rubber polymers, and developments such as crumb rubber, which cuts processing costs. And now being perfected is the synthesis of "natural" rubber.

This technical experience in man-made rubber can contribute to your profit planning in rubber products.

OUR PRODUCTS—A complete range of man-made rubber polymers: hot polymers in bale or crumb form, cold non-oil polymers, cold oil-extended polymers.

AVAILABILITY—Warehouse service from Akron, Chicago, Port Newark; direct plant shipments from Institute, W. Va., Port Neches, Texas. Service Engineering service in your plant.

Call us for your requirements

**Goodrich-Gulf
Chemicals, Inc.**

3121 Euclid Avenue • Cleveland 15, Ohio

THE NAME TO REMEMBER FOR QUALITY BACKED BY YEARS OF RESEARCH AND EXPERIENCE



AT BORG-WARNER,

"Good Enough" Never Is

Whether it's a refrigerator or washing machine, automatic transmission or timing chain, plow disc, aircraft fuel pump, guided missile booster, nuclear pump, or any of the hundreds of Borg-Warner products . . . in each one you see the fine quality that reflects the special pride we take in making it.

That's because we are not content with just "good enough." The Borg-Warner way is to "design it better—make it better." To meet this challenge, B-W scientists and engineers are continually researching ways to improve existing products and to develop new ones. B-W quality controls maintain uniformly high production standards. And constant testing assures dependable product performance.

In these ways, through many industries, Borg-Warner meets the needs of its customers today . . . plans ahead to even more and better products tomorrow.

DESIGN IT BETTER



MAKE IT BETTER

BORG-WARNER®

310 SOUTH MICHIGAN AVENUE • CHICAGO 4, ILLINOIS

structure—especially on national companies—wasn't partly responsible. When the answer came in "yes" Hodges asked the legislature to remedy the situation. At his prodding, the General Assembly several months ago approved a bill reducing corporation taxes \$7-million a year.

The day the bill passed, Allied Kennecott Titanium Corp., which had looked over three states as possible sites for its new plant, wired the Governor that the tax bill had decided it in favor of North Carolina. The new plant, to be located in Wilmington, would employ 500 people to start with, and have a \$2-million payroll.

• **Research Facilities**—The Research Triangle embraces an area of over 100 sq. mi. bounded by N. C. State College at Raleigh, Duke University at Durham, and the University of North Carolina at Chapel Hill. With these universities employing some 850 researchers themselves and with library facilities of 2-million volumes, Hodges feels industry can be attracted to the area.

So far the campaign for new industry has paid off. In the past three months alone, \$96-million in new industry has located in the state.

• **Business Efficiency**—Aside from attracting new industry to the state, Hodges has been striving to run his administration on an efficient, business-like basis. He brought in Edward Medbery, a management consultant, a friend from his Marshall Field days, to put in efficient accounting methods for the State Highway Dept.

Hodges needed the North Carolina Bar Assn. to set up a committee to see whether the state's judicial system didn't need to be revamped. When the committee reported it needed \$60,000 to \$70,000 for the study, Hodges raised \$73,000 by tapping three foundations.

To help him in his job of attracting industry and making state government more efficient, Hodges has leaned heavily on businessmen. He brought in William Saunders, retired manufacturing chief of Robbins Mills, to head the Dept. of Conservation & Development. He got Robert M. Hanes, honorary chairman of the Board of the Wachovia Bank & Trust Co., as an important mover in the Research Triangle project.

• **Personal Code**—Hodges also has brought with him into the political arena a rather strait-laced set of rules regarding his personal conduct while in office.

When he became governor, he gave up a \$5,000 a year directorship with a textile company and sold his stocks in large North Carolina corporations (although he didn't have to).

He has a flat rule against accepting any sort of personal business calls or visits at the governor's office. He also is against any special privileges on

This midget . . .

Left: *Monilia*, a slime forming micro-organism, magnified about 100 times. Below: A huge, modern papermaking machine.

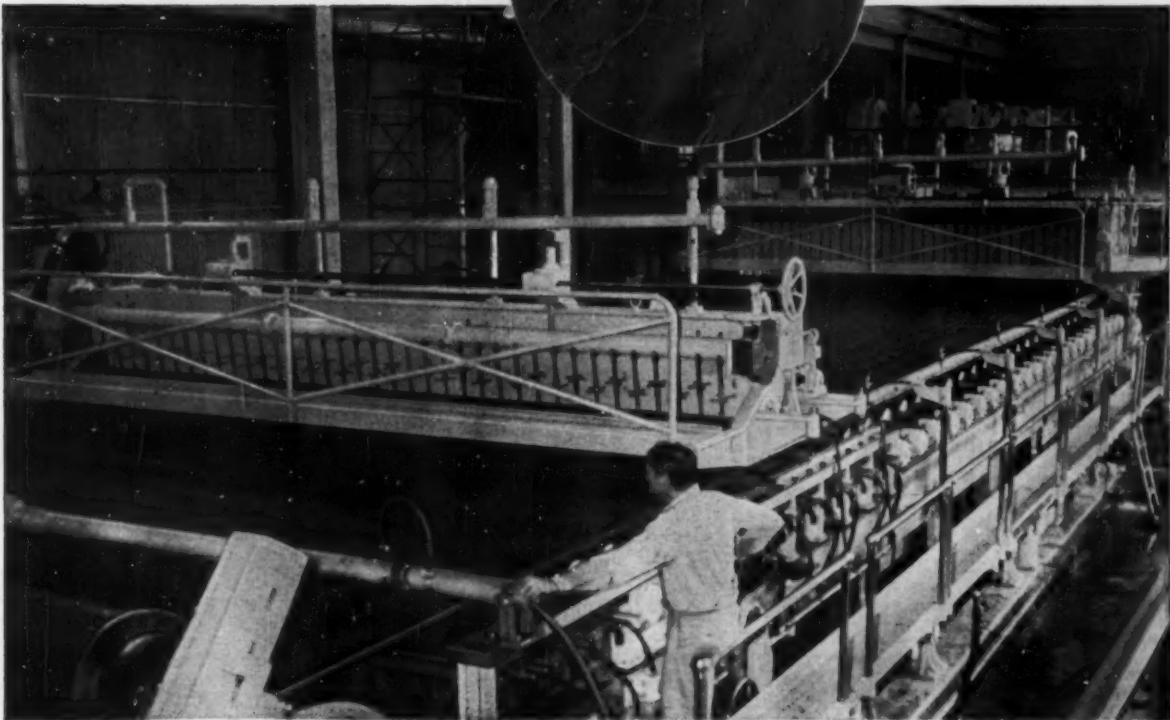


Photo courtesy of National Container Corp., Valdosta (Georgia) Mill.

. . . could hogtie this GIANT!

The midget is *Monilia*, a micro-organism that manufactures slime to spare . . . builds up like taxes. The giant is a huge, high-speed paper machine, whose production rate has a basic relationship with total paper mill output — and profit.

Slime in the headbox (the feed into the paper machine) could cause paper breaks which stop the whole operation for too-long periods.

The answer is effective slime control . . . And the reason paper machines do not stop for slime breaks is Nalco's Slime Control Program.

In paper mills, public water supplies, cooling systems, or private swimming pools, and lakes: slime and algae interfere seriously with efficient operation. Nalco has practical, economical slimicides — and consulting services — for all of them. If microbiological ills beset your water supply, call Nalco for positive action from the world's largest water treatment and service organization.

NATIONAL ALUMINATE CORPORATION

6208 West 66th Place Chicago 38, Illinois

CANADA: Alchem Limited, Burlington, Ontario

BRANCHES AND AFFILIATES IN SPAIN, ITALY AND WEST GERMANY

THE
Nalco®
SYSTEM

SERVING INDUSTRY THROUGH PRACTICAL APPLIED SCIENCE

Questions and Answers



Nalco Bulletin 55 gives authoritative, easy-to-read answers to 76 important questions about slime control in paper mills. Free on request.

WATER TREATMENT . . . ION EXCHANGE . . . PETROLEUM CATALYSTS . . . COMBUSTION CATALYSTS . . . FUEL OIL STABILIZATION . . . WEED AND BRUSH CONTROL . . . SLIME AND ALGAE CONTROL . . . OIL WELL AND REFINERY CORROSION CONTROL . . . PAPER MILL PROCESS CHEMICALS . . . PROCESS ANTI FOAMS AND COAGULANTS



READING Sprays TRACTION

RIGHT ON THE RAILS

Through a process called "rail conditioning", a new chemical is sprayed on the top of rails to increase the "pulling power" of locomotives. It was developed to combat an almost invisible, tough film of oil that forms on top of rails, causing locomotive wheels to slip, losing vital traction.

Rail conditioning is now regularly used by the Reading on mountainous grades in Pennsylvania, contributing to better transportation service.

This is just another example of how the Reading's pioneering and research in every phase of railroading—in cooperation with suppliers—is being applied promptly in providing more efficient and economical freight service.

It's another reason, too, why it is so frequently said—you can depend on the Reading.



READING TERMINAL, Philadelphia, Pa.

Reading Railway System

the basis of family ties or friendships.

And the Governor has a penchant for keeping his political books strictly in order. After he won the Democratic primary in 1956, he candidly announced that his campaign had cost 25% less than the \$40,000 funds that had been raised. As a result, he announced, each of the 329 contributors, except his wife, himself, and some close advisers, would get a 25% refund.

"It occurred to me that this was the only proper thing to do," Hodges explained. To many of the state's politicos, it was a blood-chilling act.

Another advantage Hodges has brought to the job is a sure-handed knowledge of public relations, especially in terms of gauging the public's reaction to a situation. Part of this stems from his many years experience as personnel director at the mill.

- **Anything for the State**—Although he inclines to be somewhat formal by natural bent and training, he can unbend. Recently he posed for a series of pictures for Life magazine, intended to provide a lively display of how the Governor promotes home-grown and home-manufactured products.

These included shots of the Governor wearing a synthetic suit (made in Greensboro), being shown in his drawers (made in Asheboro) before going to bed, feeding his cat a snack (made in Beaufort), and hanging up the laundry with clothespins (made in Raleigh). Mrs. Hodges hit the ceiling when she saw the pictures. The Governor's attitude: "If it did the state good, I'm for it."

IV. The Liability Side

In taking over the governor's job, Hodges soon found that some of the qualities that work out fine in the business world simply tend to make life more difficult in the political world.

- A businessman often fails to realize that in government and politics most things get done by a series of compromises. "It's usually a case of meet, meet, meet," Hodges points out.

- Where a businessman is usually inclined to rush in and be abrupt, the skilled politician moves more cautiously—and doesn't run into the same roadblocks.

- In industry you can often give direct orders. In government, you get most things you want done by persuading, cajoling.

- In the business world you reward good performance with rapid promotions, fatter salaries, and bonuses. In government, the rewards are given mainly by praise, recognition of talents, thoughtfulness.

- While a law background can be helpful in the business world, it takes on a much greater importance in the



New uses for Rem-Cru titanium

In telescope mirrors, the reflecting part is a film of aluminum applied over glass by vacuum distillation. This film takes its shape from the glass which has been ground and polished to a paraboloid that brings light rays to a focus. In the application described here, titanium would replace glass.

Telescope mirrors of titanium?

For three hundred years, astronomers have experimented with metals and glass for telescope mirrors. Newton and Herschel used speculum metal—alloys of copper and tin; others have used Stellite, magnalium (magnesium and aluminum), stainless steel, and, of course, Pyrex and glass.

Today, at least one researcher is experimenting with titanium because it has a *low coefficient of expansion*. This property is vital in giant telescope mirrors where slight temporary warping can alter the

precision focus. Titanium also has a high *strength-to-weight ratio* (section for section, it is 40% lighter than stainless steel).

Perhaps in your field you can take advantage of these unique properties of titanium. Or perhaps you can utilize other properties: its excellent ability to resist corrosion, including complete resistance to sea water and marine atmospheres, and its ability to withstand temperatures up to 800 to 1000 F.

If so, write REM-CRU today.

REM-CRU
TITANIUM

MIDLAND, PENNSYLVANIA

World's Most Versatile Metal

Sales Offices: 6033 East Bandini Boulevard, Los Angeles 22, California • 4501 W. Cortland Street, Chicago 39, Illinois • 405 Lexington Avenue, New York 17, N. Y.



Obviously our gentleman can
appreciate visibly better
appearance when he sees it.

This leads us to believe
he'll choose Plover Bond as his
letterhead paper. Even at a
glance, Plover Bond is visibly better.

Whiting-Plover Paper Company,
Stevens Point, Wisconsin.



BETTER PAPERS ARE MADE WITH COTTON FIBER

political world. Hodges finds it is difficult to appraise many situations without knowing the legal angles involved.

V. The Political Jungle

His gravest errors however, are in the field of politics and are the result of his inability to understand the extent of purely partisan feelings. As a Democrat, Hodges fights Republicans with a grin, thereby raising the hackles of many solid state Democratic officials who are doggedly partisan.

• **Typical Attitude**—A typical example of this occurred a few years back when a reporter asked Hodges whether he planned to use Robert Hanes, Winston-Salem banker, to a larger extent in government upon Hanes' retirement from his bank. Hodges' answer: "I wish I had a dozen like him," was considered inept by most of the state's Democratic officialdom in view of Hanes' reputation as an Eisenhower Democrat.

Another complaint against the Governor is that he fails to put great store by or even to understand the philosophy that party loyalty should be a prerequisite for an appointment of honor or remuneration in the state.

He stood one state conference of political leaders on end when he said that he would recognize party loyalty to the point where if a Democratic faithful was in the running with another candidate he would pick the party worker—provided of course he had the same abilities or better than his competitor.

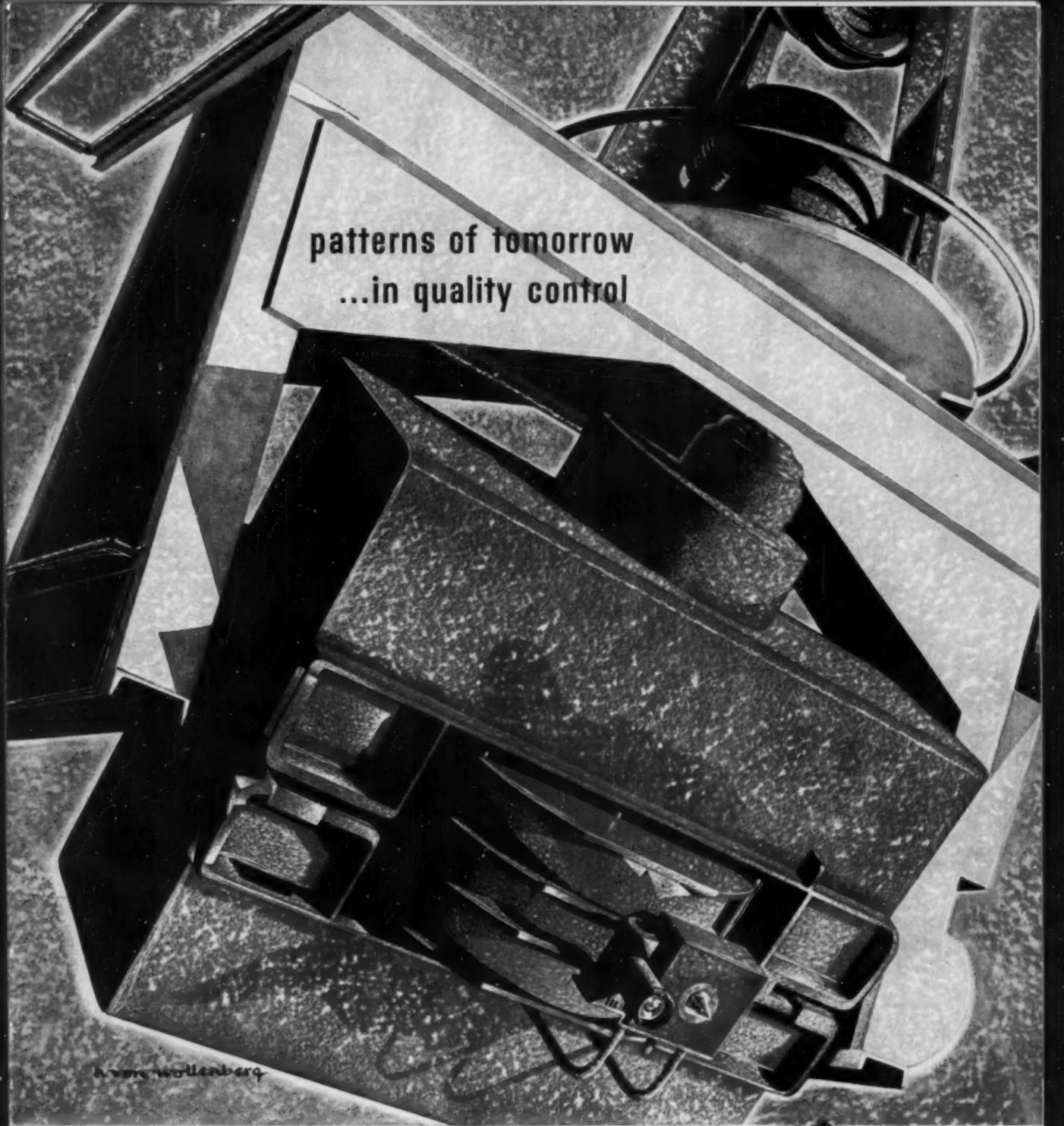
• **Neutral Appointments**—Many of his appointments—and he makes about 1,000 during a four-year term—have been nonpolitical. He has drawn his staff and top appointees from such politically neutral sources as the Institute of Government at Chapel Hill and from the textile industry. Some prominent Democrats, who have worked themselves up to positions to claim appointments as "deserving" political careerists, are furious with Hodges and wide-eyed with amazement that he would neglect to build up the nucleus of a political organization.

Not only are they unhappy about some of the political neutrals Hodges has appointed, but they are livid at his appointment of Eisenhower Democrats and Republicans to government posts or committees.

The Governor has very little reason to give a person a job for political favors rendered—for he has received few. He won the lieutenant-governorship without party support and he was an easy shoo-in when he won his own term as governor.

Hodges never had an organization of his own; in fact many of his own staff like Ed Rankin, his secretary, are holdovers from Gov. Umstead's team.

• **Blunt Approach**—Hodges is also too



patterns of tomorrow
...in quality control

von Wollenberg

A-5537A

Industry today is constantly setting higher and higher inspection standards, requiring equipment capable of finding the most minute flaws. Allis-Chalmers multi-million volt Betatron units are helping meet that demand by reaching out still further in the ever-advancing field of non-destructive testing.

better tomorrows begin today at

ALLIS-CHALMERS
MILWAUKEE 1, WISCONSIN



THE CONTAINER STATES OF



We see your packaging problems this way

Need a folding box in Austin? . . . a frozen food shipping container in Dubuque? . . . a bulk chemical container in Pennsylvania? . . . a multiwall bag in California? Our local packaging plants can get it to you . . . and *fast*. The map shows why. Wherever industry is concentrated, wherever the need for packaging is greatest, one of the St. Regis multiwall bag,

folding, set-up or corrugated box plants can probably be of service to you.

St. Regis will work with your engineers and merchandisers to provide the right materials, designs, construction and printing. St. Regis quality control, every step of the way from forests to mills to plants to finished products, assures you better packages and

AMERICA



The relative size of each state corresponds to its industrial volume. The dots represent plants.

packaging materials. Whether you package with paper, board, glassine, plastic, or laminates, St. Regis will bring you prompt, efficient, economical service . . . the kind of service you can expect from a company that builds its future on service.

For booklet, *Containers . . . Where to Find Them*, describing St. Regis products and the people to contact for further information about them, write:

St. Regis Paper Company, Dept. BW-1157, 150 East 42nd Street, New York 17, New York.

St. Regis
PAPER COMPANY

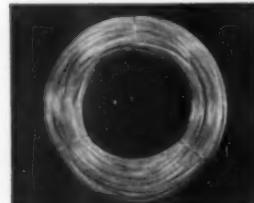
150 EAST 42ND STREET, NEW YORK 17, N.Y.



Pointed superiority

No doubt about it, rustproof brass wire makes the best pins. And Chase makes the best brass wire! This is clearly demonstrated in the products of The Star Pin Company. Chase brass wire enables them to turn out smoother, more rigid pins—preferred by the garment industry. But, in addition to brass wire for pins, Chase makes "product engineered" wire that can open *your* eyes to what low-cost, quality production really means! It's made from Kennecott copper, in a tremendous range of alloys, sizes and finishes. Get all the facts from Chase either locally or from Waterbury 20, Conn.

 **CHASE BRASS & COPPER CO.**
SUBSIDIARY OF
KENNECOTT COPPER CORP.



CHOOSE FROM 23 WIRE ALLOYS
Chase-made to precise tolerances
—and your special temper needs!
Examples: for strength — silicon,
nickel or tin alloys; for machinability —
lead-bearing or Tellurium
alloys; for corrosion resistance —
high-copper alloys. Call Chase for
your next copper alloy order!

blunt to suit the tastes of many politicians. On one occasion, a promising young Democratic Party functionary served as the paid lawyer-lobbyist for a company trying to influence legislators against one of Hodges' tax reform bills. When newspaper gossip projected this lobbyist as a candidate for an impending vacancy in a paid Democratic post, Hodges summoned him and laid down the law that no lobbyist engaged in activity against a program of the head of the Democratic Party could ever expect an appointment by him to a party post. Whatever else might have been said never has leaked out, but the lawyer is now a member of a nucleus in the state Democratic organization that holds to a position of permanent aloofness from the governor.

Hodges has also found it difficult to understand that in the political world what a friend says may be less than true. He cites the case of a lawyer friend who visited him to plead with him to parole a prisoner. He explained why the prisoner's record made him deserving of a parole. Hodges believed every word, then was furious when in checking parole authorities he found that his friend had given him only one side of the story. Hodges felt that as a friend the man should have given him a balanced story.

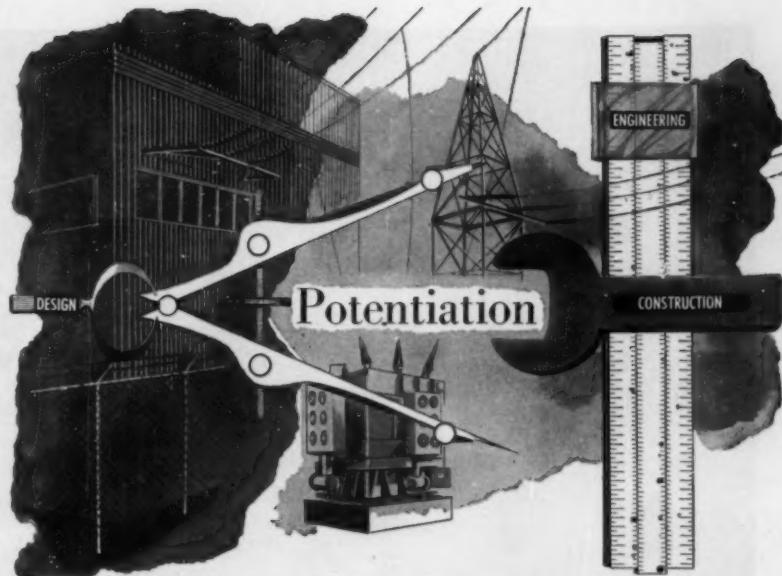
• **More Wary**—However, the Governor is learning. He no longer says everything he thinks. He is aware that everything he says is weighed and repeated by a dozen people.

And despite his political flaws, he has exercised remarkable control of the legislature. He has done this by working with the strongest members of the Assembly alerting them in advance to his plans and legislative proposals.

He has also learned how to wield effectively the governor's powers, which are quite unique in North Carolina. A North Carolina governor cannot run for re-election, nor does he have veto power. His strength comes from his appointments and from his dual job as Director of the Budget. The General Assembly can appropriate funds but it's up to the governor to make sure they are spent wisely and for what they were intended.

• **Man With a Future**—Hodges has also learned that for a governor of North Carolina to have political influence with the legislature he must continually hold himself out as a man with a future in politics or else he loses his influence.

Right now, there is considerable speculation that Hodges will eventually run for the Senate seat now held by Sen. Kerr Scott (a former governor himself) or might be a Vice-Presidential nominee on the 1960 Democratic Party national ticket. To such reports, Hodges has learned enough in the political arena to give a smiling "no comment." **END**



PRITCHARD SINGLE RESPONSIBILITY CONTRACT MAKES IT POSSIBLE!

When the whole equals more than the sum of all the parts, that's **POTENTIATION!** When you build, modernize or expand your power plant facilities with a Pritchard Single Responsibility Contract, that, too, is potentiation.

The erection of a power plant encompasses many important functions: design, engineering, purchasing, construction. When all these functions are coordinated under the single responsibility of one experienced company, the result is savings to you in time (your project is completed in less time)—in cold cash (your investment starts paying a return much faster)—in efficiency (Pritchard guarantees the heat rate of your plant.) When all of these things are added up, the total is equal to more than the sum of the parts. Whether you are looking for the engineering services of a firm with plenty of experience in the power field, or for a reliable company to construct your new power plant—or for a single responsibility for the entire project—you can look to Pritchard with complete confidence.

YOUR INQUIRY IS INVITED
SERVING THE GAS, PETROLEUM, CHEMICAL, PETROCHEMICAL,
PULP, AND PAPER INDUSTRIES AND THE POWER PLANT
NEEDS OF INDUSTRY AND CORPORATE UTILITIES.

INDUSTRY'S PARTNER FOR PROGRESS

BOSTON
CHICAGO
BUFFALO

HOUSTON
NEW YORK
PITTSBURGH

J.F. Pritchard & Co.

ENGINEERS • CONTRACTORS
DEPT. 553, 4929 ROANOKE PARKWAY

KANSAS CITY 12, MISSOURI

MANUFACTURERS
OF COOLING TOWERS AND GAS AND
AIR TREATING EQUIPMENT



PHARMACEUTICALS and the health of Mr. Jones

Softly whirs the dentist's drill until it touches Mr. Jones's tooth and then it seems to roar—yet Jones actually feels no pain. *Novocain*.

Dark hours of waiting pass and his son's fever ebbs away. *A new antibiotic*.

Cheery and smiling for the first time in weeks, Jones's assistant strides into an important conference free of tension. *Tranquillizers*.

What do these scenes have to do with Hooker—a company known as an industrial supplier? What do pills and syringes have to do with tank cars of

chlorine and drumloads of other "bulk" chemicals?

Medicines and drugs in Mr. Jones's new world *are* a giant industry—a billion-dollar industry gone far beyond the small-lot pill making in the corner drugstore—an industry in which Hooker plays a big role as a supplier of basic chemicals.

Take *phenobarbital* . . . it starts as Hooker benzyl chloride. *Sulfa drugs* . . . made with the help of our muriatic acid. *Procaine penicillin* . . . made possible with our *p*-nitrobenzoyl chloride.

Antihistamines . . . some require thionyl chloride, also used to prepare certain *sedatives* and in synthetic *vitamin A*.

The list of medicines is long and they are just one part of the great industrial complex served by Hooker chemicals.

Fact of the matter is, if you make *ANYTHING*, you either use or could use a Hooker chemical. Wild claim? Write for a descriptive products list and see how Hooker products may meet your requirements. Address: 111 Forty-Seventh Street, Niagara Falls, N. Y.

HOOKER ELECTROCHEMICAL COMPANY
111 Forty-Seventh St., Niagara Falls, N. Y.

Sales Offices: Chicago, Ill.; Detroit, Mich.; Los Angeles, Calif.; New York, N. Y.; Niagara Falls, N. Y.; Philadelphia, Pa.; Tacoma, Wash.; N. Tonawanda, N. Y.; Worcester, Mass. *In Canada:* Hooker Chemicals Limited, N. Vancouver, B. C.

HOOKER
CHEMICALS
PLASTICS

DUREZ® PLASTICS DIVISION • NORTH TONAWANDA, N. Y.
MIALK® CHEMICALS • NIAGARA FALLS, N. Y.
OLDBURY® CHEMICALS • NIAGARA FALLS, N. Y.

Dark Skies for Airline Earnings

● The lines are caught in a circle: They must have jets to cultivate earnings; they can't attract new money without better profits; they can't buy jets without money.

● Third-quarter operating profits were even worse than earlier in the year. Costs are rising all the time.

● That's why major airlines are asking CAB for fare increases of 12½% to 20%. With better earnings, they think they could find the financing for new planes.

As third-quarter reports accentuated the depressing picture of airline earnings at midsummer (BW—Aug. 10 '57, p34), the nation's major lines opened an all-out fight for higher fares. Briefs filed with the Civil Aeronautics Board last weekend call for fare increases ranging from 12½% to 20%.

In early August, CAB turned down the airlines' request for a 6% emergency boost, with the promise to speed up its full dress consideration of the fare structure. This month, hearings will begin, but it will take six or eight months to complete the study.

Meanwhile, American Airlines—biggest of them all—served notice of its intention to go ahead with expanded plans to convert its air fleet almost entirely to jet and turboprop planes by 1961.

● **Getting the Financing**—This kind of changeover is going to cost money. Even before Pres. C. R. Smith of American said this week that his line intends to buy 70 instead of 30 jets, the industry was on the order books for \$2-billion worth of jet planes. That's a lot for an industry that had combined assets of only \$1.28-billion and net worth of only \$575-million at the end of 1956.

The nosedive of airline earnings since 1955 has been reflected in stock values, making it hard to finance new equipment by issuing more stock. The same deterioration of profits has cooled the industry's welcome at the doors of banks and institutional investors, making it hard to borrow money. In a time of tight credit, the big lenders incline to be choosy about where they place their funds, and the airlines don't rank high so long as they are being backed into a corner by rising operating costs and impending needs to pay for new equipment.

● **Fares Are the Key**—An average 15% boost in passenger fares is the key to the dilemma, the airlines insist.

American Airlines, says Smith, de-

pends on the 15% increase and annual earnings of \$25-million for its plan to replace its present fleet of 204 aircraft by 1961 with only 120 planes for its coast-to-coast service: 70 jets, 35 Lockheed Electra turboprops (jet engines turning propellers), and 15 holdover DC-6s. The seating capacity and superior speed of such a fleet would enable American to carry more passengers per day than now, according to Smith.

Trans World Airlines and Eastern Air Lines both cited 15% as the required increase, in last weekend's petitions to CAB; Braniff Airways, Inc., suggests 12½%; Capital Airlines, Inc., wants 20%.

I. Profits Shrink

Airline earnings dropped about 23% from 1955 to 1956. In the first half of this year, the 12 domestic trunk lines dropped another 23% from the comparable period of 1956. Altogether they earned a measly \$17.3-million, which is less than a single medium-sized oil company—Atlantic Refining—was able to net.

Third-quarter reports look even worse. American Airlines, which is shooting at \$25-million a year by 1961, earned only \$10.1-million in nine months, compared with \$17.1-million in the like period last year. Eastern earned \$3.3-million, compared with \$8.1-million a year earlier.

TWA, which was one of two companies that improved its showing in the first half, continued to improve in the third quarter, however. Vice-Pres. R. E. Montgomery said this week that the July-September profits "definitely" wiped out the first-half loss of \$1.14-million (the 1956 first-half loss had been \$1.7-million).

United Air Lines, Inc., estimated six months ago in its brief supporting

the earlier requested 6% emergency boost in fares that it would earn only \$7.1-million in 1957, compared with \$11.2-million in 1955 and \$10-million in 1956. Now it finds it won't reach \$7.1-million. In the light of increased operating costs, it is revising its forecast of 1958 profits down from \$3.9-million to a skimpy \$440,000—unless CAB grants fare relief.

● **In a Squeeze**—The airlines are in the rare position of a growth industry whose volume is still rising fast while profits are going down. There are several reasons for this predicament:

• Operating costs have risen faster than revenues. For eight years, passenger traffic has gained an average 18% a year; this year, it is estimated at 12% to 15% ahead of last year. But such things as wages, which take a surprising 40% of airline revenues, and fuel, which takes 15%, have gone up even more. Eastern, for example, reports wage cost up 26% over the first nine months of 1956, and fuel cost up 31%.

• Traffic over-all is increasing, but so is competition. The load factor (percentage of seats occupied) is beginning to decline. Last year, the airlines filled 65% of their seats; this year's first half, 62½%. The big lines blame it on CAB's opening of choice routes to competition from the smaller, newer airlines.

• The market for used planes is weakening. Airlines have always counted on selling older planes to help pay for new ones. A few years ago, used planes sold for more than their original price. That's not true today. American Airlines, for instance, is reportedly asking \$375,000 each for some Convair 240s; the best bid so far is less than \$200,000. Yet this is an important source of earnings. American got \$1.3-million—about 13%—of its nine-month profit from this source; last year, United raised \$4.6-million through sale of old DC-3s and DC-4s.

• **Slowed Write-Off**—Another factor impairs the airlines' cash position even more. That is the expiration of fast write-offs on new equipment at the first of the year.

Over the years, the Office of Defense Mobilization had permitted accelerated amortization on 900 commercial planes. By writing off 80% of the cost of these aircraft in five years instead of the usual seven, the airlines understated their earnings but, in return, built up depreciation reserves for the purchase of new planes.

From 1953 through 1955, depreciation and amortization charges ac-

**"200,000 more
Monday!"**



Hinde & Dauch produces corrugated boxes in large volume quickly and economically. Better see H & D, authority on packaging.


HINDE & DAUCH
 Subsidiary of West Virginia Pulp and Paper Company
 14 FACTORIES • 42 SALES OFFICES
 One of America's largest box producers

counted for more than half of the airlines' \$600-million investment in new equipment, and much of this came from fast write-offs. Now, earnings are subject to a bigger tax bite, leaving less capital for buying the jets.

• **No Choice**—As long as one line can buy jet planes, the industry as a whole sees no choice about following suit. The turboprops already in service—notably Capital's British-built Viscounts—have been spectacularly successful in the competition for passengers.

Capital's Viscounts make the Chicago-Washington run in about the same time as American's DC-7s, but they are so quiet and comfortable that passengers flock to them while American cancels unprofitable flights.

II. No Easy Way Out

The combination of poor operating profits, disappointing returns from the sale of retired planes, and inadequate depreciation reserves adds up to a financial crisis. Airline officers confer almost daily with banks, insurance companies, investment bankers, and each other. But they find no easy way to raise the huge sums they need for their jet program.

• **Loans Tightened**—So precarious do airline prospects look to big lenders that the lines find their usual avenues of credit constricted or closed altogether.

"I doubt that insurance companies will lend any more money to the airlines until CAB adopts a more realistic policy on fare increases," says an insurance company officer who handles airline loans. "Some airline loans are already close to going into technical default." (Lending institutions generally insist that certain financial ratios be maintained as a condition for continuation of a loan.)

An officer of a big New York bank has this to say: "What with tight money, we're up to our neck in other loans—we could hardly be interested now in extending more credit to airlines."

Another banker adds: "We will have to see some better earnings before we can do anything further."

• **Stocks Depressed**—Investment bankers discourage any idea of financing new equipment by issuing new stock. Except for American and Eastern, they point out, practically all airline stocks have fallen far below book value, and present stockholders wouldn't be likely to approve a new issue that would dilute their equity.

Airline stocks are off even more sharply than the rest of the market. Standard & Poor's index of five airlines is down about 40% from its 1957 high. Yet some Wall Streeters say new stock

*Electricity can do more for you
...through better control and distribution*



"I wonder where the fuses are?"

Not much of a problem if you've got enough spares. No problem at all when you have circuit breakers. You restore power with a flick of a switch. And with the introduction of STAB-LOK®, Federal Pacific brought circuit breaker convenience within reach of every home owner—thanks to ingenious design and mass production techniques. Successful? Stab-lok captured a lion's share of the market...can be found in millions of homes throughout the nation.

Introducing new products that revolutionize whole segments of the electrical industry has been a conscious goal of Federal Pacific for years. And it's paid off! Everyone who uses electricity benefits from the product advances

developed and introduced by Federal Pacific. And, as a result, new developments since 1949 account for over 75% of Federal Pacific's current sales volume.

The policy of aggressively seeking new and better ways to control electricity has established Federal Pacific as a leading producer of electrical control and distribution equipment. In fact, throughout the electrical industry, people have come to expect important new developments to come from Federal Pacific *first*.

FEDERAL PACIFIC COMPANY
Main offices: 50 Paris Street, Newark 1, N. J.

FEDERAL FPE PACIFIC
Better Products to Control Electricity

**To executives
of companies with
growth possibilities**

Can you use additional cash profitably?

**Commercial Credit
has \$25,000,
\$100,000 or millions
available
immediately . . .
for as long as you
need it . . .
without renewals**

If additional cash working capital would make it possible for you to take advantage of business opportunities that might otherwise be missed, it should be to your advantage to contact COMMERCIAL CREDIT.

Experience has proved that COMMERCIAL CREDIT's Commercial Financing Plan for manufacturers and wholesalers is usually able to provide more cash than is available from other sources. Funds are normally ready for use 3 to 5 days after first contact and are available continuously (if needed) without negotiations for renewal.

Cost is minimized because you pay only for cash actually used as your need varies and the one reasonable charge is tax deductible. No interference with management. No preliminary expense. No long-term commitments.

Contact the nearest COMMERCIAL CREDIT CORPORATION office listed. Say, "Send facts about the plan described in *Business Week*."

Commercial Credit Building, Baltimore 2
222 W. Adams Street, Chicago 6
722 S. Spring Street, Los Angeles 14
100 E. 42nd Street, New York 17
112 Pine Street, San Francisco 6

**Consult
COMMERCIAL
CREDIT**

**Capital and Surplus
over \$200,000,000**

COMMERCIAL CREDIT COMPANY subsidiaries, during each of the last several years, advanced over one billion dollars to manufacturers and wholesalers to supplement cash working capital. The 1956 total volume of finance subsidiaries amounted to over three billion dollars.

financing may be the only ultimate solution.

"Over the long run," says Selig Altshul of Aviation Advisory Service, "the huge sums of outside financing necessary to pay for the jets won't be forthcoming unless more equity capital is infused into the industry."

• **Equipment Trusts**—Last May, Congress enacted a bill specifically authorizing the use of equipment trust certificates—long used by the railroads—in financing airliners. These certificates are much like bonds, except that a specific income-earning property—in this case an airplane—is pledged against payment of interest and principal. In default, the creditor can take possession of the plane and presumably sell it at no loss.

Altshul and other Wall Streeters are skeptical of the scheme's chance of success in the airline industry. Airplanes, they say, obsolesce much faster than railroad boxcars and are less interchangeable among airlines. For example, a banker comments, each airline uses a different instrument panel arrangement, which would have to be remodeled at considerable expense if a plane had to be resold.

Moreover, most airlines will have to get permission from prior lenders before issuing equipment trust certificates. Wall Street's Smith Barney & Co., which is trying to interest several lines in the certificates, sees no problem here, however. Prior lenders would be happy to grant their approval, the financial house says, since the new equipment would strengthen the financial position of the debtor.

III. How Things Stand

Whatever the source, more money must flow to the airlines—from earnings, borrowings, or new equity—before the industry can cross into the Jet Age. Here's how the airlines' jet-transition program stands:

American obtained 40-year loans totaling \$135-million from Metropolitan Life and Prudential in 1955 and 1956, at rates of 4% and 4 1/2%. But the line will need more money—Pres. Smith this week estimated total cost of the revised program at \$200-million. Each of the 30 Boeing 707 jets already on order is priced at around \$5-million.

Eastern has already taken down \$50-million of a \$90-million loan arranged in December, 1955, with Equitable Life at the low interest rate of 3 1/2%. Eastern will use the rest toward payment for the 40 Lockheed Electra turboprops it has on order. No plans have been announced for financing the 20 Douglas DC-8 jets that Eastern also ordered.

United has arranged with three in-



CABLES THAT DEFY THE MIGHTY MISSISSIPPI

Power lines for St. Louis are safeguarded by neoprene—a Du Pont synthetic rubber

Four new cables to help meet the increasing power needs of St. Louis were recently buried 14 feet beneath the bed of the Mississippi River. For this vital project Union Electric Company again chose cables protected by covering of Du Pont neoprene. It has used cables of this type for other under-river installations in the past.

The neoprene cover guards the cable in many ways. It serves as a cushion between the steel wire armor of the cable and its lead sheath, reducing galvanic corrosion of the wire armor. In addition, it protects the lead from being scored. And because neoprene is a resilient material able to retain its original properties indefinitely, the lead sheath will have long-term protection since neoprene reduces the effects of vibration, bending and strain.

Of all resilient materials, only rugged neoprene has balanced resistance to sunlight and weathering, oils and chemicals, heat, flex cracking, abrasion and cutting, oxidation and aging. This same combination of properties can help you cut costs of replacing rubber products you use, or

improve performance of products you make. Your experienced rubber goods supplier can show you the benefits of neoprene and Du Pont's new synthetic rubber, HYPALON*. To get the full story about both elastomers in a free booklet, just mail the coupon below.

*REG. U. S. PAT. OFF.



Better things for better living
...through chemistry

NEOPRENE

—made by Du Pont
for 25 years

E. I. du Pont de Nemours
& Co. (Inc.)
Elastomer Chemicals Dept. BW-11
Wilmington 98, Delaware

Please send me a copy of your free booklet,
"The Du Pont Elastomers
...a Management Report."

Name _____

Position _____

Firm _____

Address _____

City, State _____

MAIL THIS COUPON NOW—WHILE YOU'RE THINKING ABOUT IT



...the two-way answer to fastening problems

Here's a combination that slashes production costs and gets rid of fastening problems in a hurry—Milford Rivets made to high-quality standards to assure a better finished product for you... Milford automatic rivet-setting machines that can be quickly adapted to your particular fastening needs.

To improve product appearance and strength
 ...to take full advantage of automatic assembly
 ...to cut delivery time and production costs
—get in touch with Milford first!



**MILFORD RIVET
& MACHINE CO.**

MILFORD, CONNECTICUT • HATBORO, PENNSYLVANIA
 ELYRIA, OHIO • AURORA, ILLINOIS • NORWALK, CALIF.

surance companies—Prudential, Metropolitan, and Mutual Life of New York—for \$120-million of 4% debentures as needed. And a syndicate of banks headed by First National City is standing by with another \$30-million. All this money is repayable in five years.

TWA recently raised \$43-million by sale of stock to help pay for equipment ordered by Howard Hughes. Wall Streeters say this wasn't true "outside financing"—stockholders subscribed to 75% of the shares and the rest were taken up by Hughes Tool Co., which now owns 78% of TWA. But the sale illustrates the problem of equity financing by airlines. When it was announced, TWA's per-share book value dropped from \$20.05 to \$16.50, since the shares had to be sold at a depressed price of \$13 a share.

Capital was the first entry in the jet race, and its 59 turboprop Viscounts helped to boost operating revenues 57% in the first half of this year, compared with first-half 1956. However, depreciation charges have soared, and the company has had trouble selling its older planes.

Capital has been running in the red since 1955 and has had to defer its \$70-million order for another 15 Viscounts and 14 British Comet jets. But the line expects to break even this year and, as one Wall Street analyst says, its working fleet of Viscounts is the base for future profits.

Northwest Airlines needs \$75-million or so for new equipment and can't get it; the line is still paying for its last round of piston-engine aircraft. It ordered a lot of Pratt & Whitney jet engines before prices went up but is still looking for the airframes to put around them.

Northeast Airlines had to postpone its order for Bristol Britannia turboprops for lack of financing (and because problems with engine icing were delaying CAA certification of the planes). Northeast is running in the red this year and now is threatened with loss of its federal airmail subsidy. It is now the last major airline to receive a subsidy.

Delta Air Lines has arranged a \$30-million, 10-year loan from 25 banks headed by Citizens & Southern National Bank in its headquarters city of Atlanta. Within a year or so, though, Delta will need another \$30-million or \$40-million to help pay for eight DC-8s and 10 Convair 880 jets that are on order, plus any additional jets that may be ordered later.

Brannif Airways has completed about 25% of its \$100-million spending program. The company has taken down \$15-million of a \$40-million credit placed with institutional investors, good until 1961. Last year \$10-million was raised by a new stock issue. **END**



Hospitals use

NIBROC[®] TOWELS

more than any other paper towel

And like hospitals—you too have better reasons than ever to buy Nibroc Towels. Now available—New Nibroc white towels, pure white—product of an exclusive Brown Company "white magic" bleaching process. Nibroc Towels in natural shade are vastly improved too, by new manufacturing techniques. Nibroc Towels are soft, sanitary, absorb water instantly.

Nibroc was the first and is still the finest

wet-strength towel. *Economize with Quality.* You can save money if you buy Nibroc Towels with Nibroc Sofwhite[®] and Softan[®] tissue. For information call your dealer listed under "Paper Towels," or write us at Dept. ND-11, 150 Causeway Street, Boston 14, Mass.

BROWN  COMPANY



Other NIBROC Quality Products: INDUSTRIAL WIPERS • WINDSHIELD WIPERS • KOWTOWLS • WALL, FLOOR and RECESSED CABINETS



Global Network of Correspondent Banks Helps Guaranty Customers Solve Financial Problems

Few facets of American business are currently as intricate, or demand so much in the way of specialized knowledge, as the field of foreign trade financing.

In many countries exchange and import restrictions have become tighter and more complicated. Currency regulations, business conditions, and internal government regulations all go through stages of change.

It is vital, therefore, that American businessmen engaged in foreign trade have access to on-the-scene sources of facts, information, and assistance.

The customers of Guaranty Trust Company are in an especially favorable position in this regard because of the bank's vast network of correspondent banks all over the globe.

Guaranty maintains close relationships with no fewer than 2,000 of the oldest and most important correspond-

ent banks in the world, some of these relationships going back over 100 years. The central bank of almost every country in the free world is a correspondent of Guaranty Trust Company.

These 2,000 banks have an intimate knowledge of financial, business, and political conditions in their own countries. And there may be occasions (in the event of an exchange shortage, for example) when a native bank could be in a preferred position.

The officers of Guaranty's Foreign De-

partment keep in constant and close contact with conditions abroad. Last year these officers traveled in more than 50 countries, getting first-hand information not only from our correspondent banks, but from industrialists and government officials as well.

This vast experience in world trade is available to all of Guaranty's customers. If you do business abroad, or plan to, call or write our Foreign Department. We will be glad to show you how this bank can serve you.

GUARANTY TRUST COMPANY OF NEW YORK



140 BROADWAY, NEW YORK 15

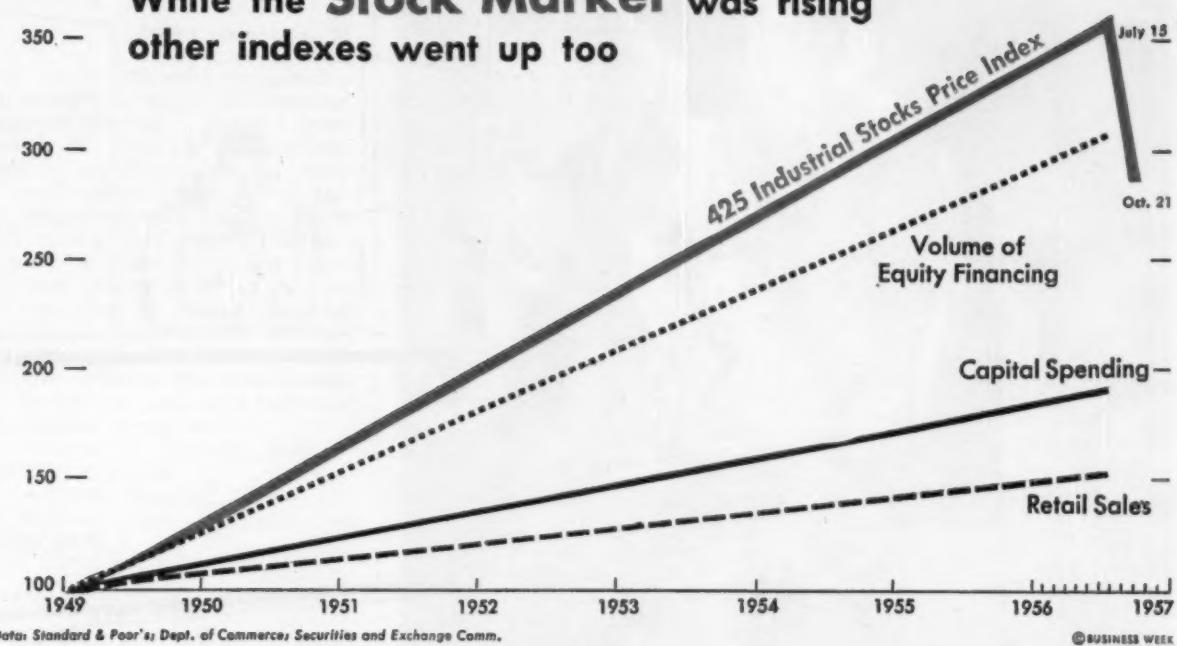
Capital Funds in excess of \$400,000,000

5th Ave. at 44th St., New York 36 • Madison Ave. at 60th St., New York 21
40 Rockefeller Plaza, New York 20 • London • Paris • Brussels

Member Federal Deposit Insurance Corporation

1949 = 100
400 —

While the Stock Market was rising other indexes went up too



Data: Standard & Poor's; Dept. of Commerce; Securities and Exchange Comm.

© BUSINESS WEEK

Will the Bears Lead Them Down?

So far, the stock market decline hasn't been reflected in other economic indicators. But traditionally a bear market makes corporate financing more difficult and slows dividend payments—which can hit retail sales.

When the stock market booms, it is normally a sign of over-all prosperity—and it's also part of the mechanism by which that prosperity grows. This was the case during the long bull market that began in 1949. As the chart above shows, other business indicators registered big advances while stock prices soared to record levels.

What happens in a market decline? If it is sharp enough (at least a 25% correction) and goes on long enough (at least six months), then business, too, usually will feel the effects. Even a milder and shorter break can have an impact.

• **Influence on Decisions**—The drop in stock prices since mid-July had not, up to this week, been accompanied by comparable changes in over-all business activity. But there are indications that the fall in the stock market is beginning to have an effect on business decisions. And if the market stabilizes at its present levels, or slides still farther, it's pretty sure to be a depressing factor on business.

The relation between the market and business is a complex one, with continuous feed back in both directions. Wall Street's record as an economic forecaster is no better than fair. Generally, fluctuations in the stock averages are more reliable as a reflection of changes in business sentiment than in business conditions. But in a real sense, the market helps to make its own predictions come true—by its impact on business decisions.

• **Feed Back**—The stock market has a short-term life of its own that often acts independently of the surveys of business. In 1949, for example, stock prices did not immediately respond to the pickup in business following the 1948-49 recession. And in 1946, the 25% decline in stock prices was followed by a spurt, rather than a drop, in business.

But in a true bear market, where the decline is sharp and prolonged, it is not a case of speculators guessing wrong but of business being strained. And the stock market's performance can have

an influence on business that will, in turn, lead to a further deterioration in stock values.

The classic case is 1929. During the first half of the year, business was showing softness, but faith in common stocks was so widespread that prices soared to dizzy heights. Then, the market broke, seemingly to readjust to economic conditions. But the severity of the drop exerted considerable influence on business decisions and led to a general cutback in spending. This produced a worsening of stock prices and a general disenchantment with equities that resulted in renewed deflationary pressure. The 1937 market break had much the same pattern, although in less drastic, more telescoped form.

This year's decline shows some classic features. The point the present drop has reached is consistent, for the most part, with the failure of business to stage an upturn this fall. But it has gone deep enough to influence some business decisions. It is not easy to spot the economic consequences of the drop, partly because there is a definite lag in most of the affected indicators, and partly because so many other factors play a part in corporate planning.

• **Caution**—Nevertheless, some connec-



Are your employees protected against crushing medical bills?

There are times when a man can't go it alone —when the bills seem so big that he'll never be able to pay them.

You can protect your employees and their dependents against crushing medical expenses. A Travelers Group Major Medical Expense plan gives them the means to cope with personal disaster and *adds to their day to day confidence on the job.*

As a pioneer in employee benefit plans for more than 40 years, The Travelers is uniquely equipped

to design a Group Major Medical program to meet *your company's requirements.* And 251 Travelers claim locations from coast to coast assure you of prompt claim service at any time.

More than 1,750,000 employees and their dependents are already covered under Travelers Group Major Medical Expense plans.

Have you considered this important protection for *your employees?* Call your Travelers agent or broker for full details.



THE TRAVELERS

INSURANCE COMPANIES, HARTFORD 15, CONNECTICUT

*All forms of business and personal insurance including
Life • Accident • Group • Fire • Marine • Automobile • Casualty • Bonds*

"...it would take a...drastic decline...to bring stock financing to a halt..."

STORY starts on p. 95

tions are evident—even if indirectly. For example, no matter how corporate executives may seek to dismiss a downturn in the stock of their particular company, the decline itself does inject a note of caution, just as the bull market created optimism. Among executives holding stock options that have decreased in value, the caution is usually more apparent (page 125). It may not be a case of chilling long-range optimism, or a cooling off in the desire to hold equities, but it is responsible for some significant short-term changes.

These are the areas most influenced by a decline in stock values:

- Corporate spending, especially capital expenditures.
- Equity financing.
- Retail sales, particularly of luxury goods.

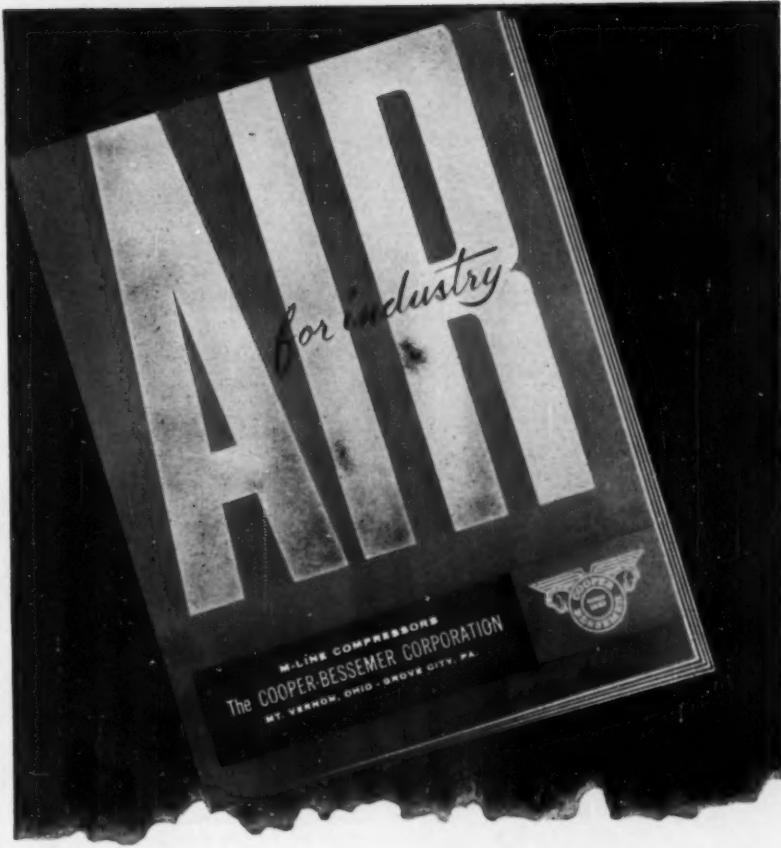
I. How Financing Is Hit

The most important direct impact of the stock market drop is on corporate spending—and corporate financing. In the first stages of a stock market boom, a company needing cash to finance expansion plans has a number of choices. It can go to a bank for a term loan; it can sell debt issues; or it can sell stock.

This was the case in 1955, when credit was relatively cheap and readily available. The booming stock market and the recovery of business put businessmen in an optimistic frame of mind and led to a big demand for funds. But with the Federal Reserve keeping a tight rein on credit, the cost of borrowing and the availability of money became more and more of a problem.

• **No Longer Cheap**—As long as stocks were booming, however, corporations could always finance relatively cheaply by selling stock. A great many companies took advantage of high stock prices to raise funds for expansion during the boom. But, as one financial executive puts it: "A lot of firms are now kicking themselves for not getting money in the stock market when it was cheap to do so. Now they have to pay a price."

The shutting off of this last area of cheap financing does not mean a complete drying up of new stock issues. It would take a broad and drastic decline, such as the 1929 debacle, or the 50% drop in 1937, to bring stock financing—or other ways of raising funds—to a halt. Some companies are so far along in their expansion plans that they would



NEW BULLETIN *on meeting the need for industrial or shop air supply*

• **Describes Cooper-Bessemer M-Line Natural Force Balance Compressors, 200 to 6,000 hp.**

• **Explains the advantageous new features developed by one of America's oldest engine and compressor builders.**

• **Simply ask for Bulletin M-81, "Air for Industry".**

Cooper/Bessemer

GENERAL OFFICES: MOUNT VERNON, OHIO
ENGINES: GAS - DIESEL - GAS-DIESEL
COMPRESSORS: RECIPROCATING AND CENTRIFUGAL
ENGINE, MOTOR OR TURBINE DRIVEN

Whether it's PIANOS
or PAINT

KREOLITE Wood Block Floors

Help make better products



In the plant of a famous maker of pianos, these Kreolite Wood Block Floors are being used for showrooms and places where it is easier to



In many building areas required to be plain, Kreolite Floors are demonstrating their economy and easy maintenance.

Why Kreolite Wood Block Floors in plants making entirely different products? The answer is easy, if you know about Kreolite's many superior features.

Ruggedly durable, but kind to feet with their cushioning resiliency, these floors are cleaner because they are dust-free when finished with Kreolite Jennite. They are safer too, because they are spark and skid-proof. Kreolite Wood Block Floors are also most economical to install and maintain.

It's a fact that many Kreolite Floors outlive the building. Write today about complete specification and installation methods that can save you important money.



For gym floors and
vocational shops,

KREOLITE FLEXIBLE STRIP*

resilient flooring is tops.

*Made of Kiln Dried End Grain Southern Yellow Pine Wood Block in Natural Color

THE
JENNISON-WRIGHT
CORPORATION
TOLEDO 9, OHIO

KREOLITE FLOORS

Railroad Switch and Industrial Floors, Gym, Bridge, and Deck Lumber

not be put off by anything short of a catastrophic drop. Other concerns are so squeezed that they are willing to pay a high price for fresh funds. Still others consider that future profits appear big enough to justify expensive financing.

• **Company Reactions**—Some companies obviously missed the market. Standard Oil of New Jersey is going ahead with a big \$250-million-plus stock offering despite the fact that it will be about 15% more expensive than if it had gone to the market this summer. But its needs are sufficiently pressing and its potential profits sufficiently sure to proceed with its financing. Says one underwriter: "Jersey Standard can afford to pay more, but there are few companies with the standing or the prestige of Jersey Standard."

Underwriters report that many companies are now postponing financing operations because of the high cost involved. This has as yet not shown up significantly in statistics, but that's because there is a lag in reporting and also because Securities & Exchange Commission regulations entail a great deal of preliminary planning. A company that decided to raise capital through a new stock issue last spring is only now ready to go to the market. The companies that have not yet made a choice will now tend to postpone any financial operation that does not seem strictly necessary.

There have already been some instances where companies have refused to go ahead even though they have completed SEC requirements. Last week, for example, Taylor Instrument Co. called off a common stock rights offering on the grounds of unsettled market conditions. And Commercial Credit Co. has postponed until the market improves a \$50-million bond offering that was non-callable for 20 years.

• **Bearish Pattern**—But these are merely omens of what usually happens in a bear market. In 1937, for instance, corporations floated \$102-million in securities, with \$17-million coming via the stock market. The next year, total flotations were under \$73-million, with stock financing dropping to \$1.5-million. Even when a drop is shortlived, stock financing tends to suffer. In 1946, stock financing came to \$61-million, but the next year it was down to \$52-million.

Stock financing should hold up somewhat better now than it did in either 1937 or 1946. This is not so much because the drop is less severe but because other means of financing are still relatively more expensive. Bank loans are now about 40% more costly than they were two years ago;



WASHINGTON STEEL CORP., WASHINGTON, PA.

He'll go home *fresher* with a *bigger* day's work done!

New Towmotor fork lift trucks are engineered with your operators' morale—as well as company profits—in mind.

New-concept functional design. New planned comfort features. New simplified controls. New Towmotor advances like these let personnel do the "head-work" instead of the hard work! Workers go home fresher, less fatigued.

Management profits in many other ways with the exclusive developments that put new Towmotor fork lift trucks far out in front today. Consider these

"first-time" features offered at no extra cost:

- New scientific weight distribution
- Newly improved dual-entry design
- New "tight spot" maneuverability
- New adjustable off-center visibility

- New cushion-mounted jar-free engines
- New maximum "free lift" mast

Weigh these facts before you invest in a fork lift truck today. Get new Bulletin SP-23 from Towmotor Corporation, Cleveland 10, Ohio.

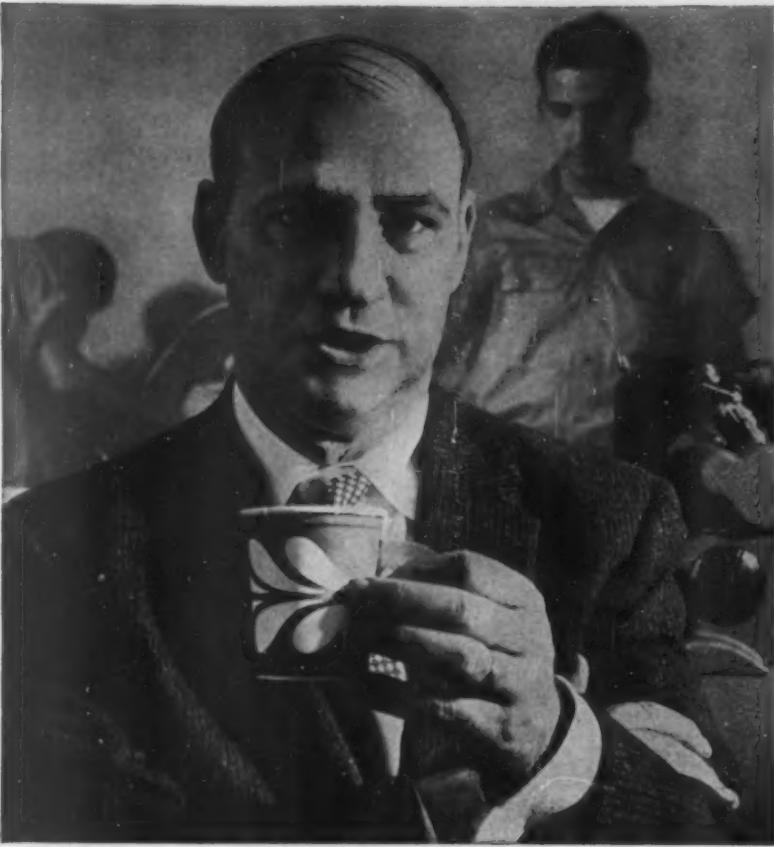
**Leaders for 38 years
in building Fork Lift
Trucks and Tractors**

TOWMOTOR

THE ONE-MAN GANG

-GERLINGER

Gerlinger Carrier Co., Dallas, Oregon is a subsidiary of Towmotor Corporation, Cleveland, Ohio



"We're amazed at the money we save on coffee-breaks with our Westinghouse!"

—Howard Printing Company, New York

"Coffee-breaks are good for our pressmen, and we're all for them. But their time is so valuable that taking 30 to 40 minutes a day to go out for coffee was costing the company hundreds of dollars a year! Then we got a Westinghouse Hot and Cold Water Cooler—and what a big difference! It cuts coffee-break time in half . . . by serving plenty of hot water for instant coffee and soups—right here at the job! Serves cold drinking water, too. And our employees really like it . . . it's so handy . . . and they're saving around 8 cents on every cup they drink. Not to mention all the money we're saving!"

Howard W. Goldman

President, Howard Printing Co.

Control the coffee-break in your company. To see how convenient the new individual beverage packets are—mail coupon below for FREE "STARTER PAKS" of famous brand instant beverages.

YOU CAN BE SURE...IF IT'S

Westinghouse

FREE!

Westinghouse, Springfield Works, Springfield, Mass.

Gentlemen: Please send me FREE HOT and COLD "STARTER PAKS" of instant coffee, cocoa, soup. Also complete information on Westinghouse HOT and COLD Water Cooler.

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

Dept. BW-1 (Please attach to company letterhead)



Hot and Cold Water Cooler

moreover, the Federal Reserve's tight money policy has cut down on the amount available. Similarly, interest rates on new corporate debt issues range from 30% to 50% above the cost of debt financing in 1955, and, in addition, companies are "locked in" to these expensive rates with no-call provisions. By contrast, stock financing is only about 20% more expensive, which suggests that it will continue to be used to a considerable extent.

But the signs point to a lower level of capital expenditures. Now that stock financing is no longer cheap, companies are bound to reconsider expansion plans calling for new funds. A bull market invites stock financing because the dilution of equity involved is quickly made up by higher profits and a higher value of the stock. But in a market that shows bearish tendencies, stock financing increases the dilution while profits are in doubt.

• **Profit Pinch**—The fact is that corporate profits are already revealing the squeeze of higher costs—including higher financing costs. According to Dept. of Commerce estimates, corporate profits in the second quarter were at an annual rate of \$42-billion, down from \$43.9-billion in the first quarter, and \$45.6-billion in the last quarter of 1956. This drop occurred even though corporate sales reached record figures. This indicates that rising costs are mainly responsible for the narrowing of profit margins.

Higher wage rates are one reason for rising costs. But higher financing costs are also taking their toll. One big corporation estimates that its financing operations—bank loans and security floatations—have cut its per-share earnings by over 10% in the past year. The decline in the market means that the cost of financing has now reached the point where it is a burden to any company that cannot be assured of much higher sales.

II. How Dividends Are Hit

The drop in the market is also inducing new caution on dividends. Dividend payments have a close relationship to stock prices; in the bull market, they increased from \$7.5-billion in 1949 to almost \$12-billion in 1956. In a bear market, though, dividends decrease more slowly than they tend to increase when the market is in a bullish phase. Thus, in 1937, dividends totaled \$4.7-billion; by 1939, the payout had decreased, but only to \$3.8-billion. And in both 1946 and 1949, the drop in the market was not sustained long enough to affect dividends.

• **Decline Due**—It is still too early to tell if the present decline will result in a lower level of dividends. But the

Again this year, people are buying more REMINGTON® typewriters than any other brand



The Remington Standard®—Exclusive Tested Tempo Touch, plus ease of handling and overall typing results make this the finest manual typewriter available today. Over 100 type styles and seven different colors to choose from. Send for "Standard" R8751.



The Remington Noiseless®—Typing perfection with quiet! The Remington Noiseless delivers maximum typing efficiency with 85% less noise than any other typewriter. Over 100 type styles and seven different colors to choose from. Send for "Silent Partner" RN8851.



The Remington Electric—Electricity does the work...makes typing easier, faster, better! Typing production can be increased by as much as 50%. Over 100 different type styles and seven different colors to choose from. Send for "Launching" RE8811.



The Remington Statesman—An incomparable new Proportional Spacing Electric Typewriter that turns out letters and reports that are truly distinctive...resemble the finest printwork. The perfect typewriter for executive correspondence. Send for "Statesman" RE8867.



The Remington Quiet-riter® Portable—Exclusive Miracle Tab, Super-Strength Frame, Simplified Ribbon Changer and beautiful printwork are among the many features contributing to its popularity with the entire family. Send for "Quiet-riter" WT1290.



The Remington Ten Key Decimal Tabulator Typewriter—Statistical typing takes on new speed and ease, thanks to the extra 10 keys—especially designed for columnar work. Production can be increased from 10% to 40%. Send for booklet "10 Keys" RE8500.

only Remington makes all four typewriters...STANDARD, NOISELESS, ELECTRIC and PORTABLE

Remington Rand
DIVISION OF SPERRY RAND CORPORATION



Continental has the

CONTINENTAL  CAN COMPANY

SERVING INDUSTRY...SERVING AMERICA

CANS, VAPOR-VACUUM® CLOSURES, FLEXIBLE PACKAGING, FIBRE DRUMS,
SHIPPING CONTAINERS, STEEL CONTAINERS, PAPER CONTAINERS, PLASTIC CONTAINERS,
FOLDING CARTONS, DECOWARE®, CROWNS AND CORK, BONDWARE®, GLASSWARE,
BAGS, CONOLITE®, GLASS CONTAINERS, PAPERBOARD, ENVELOPES

TAILOR-MADE
PACKAGE SERVICE

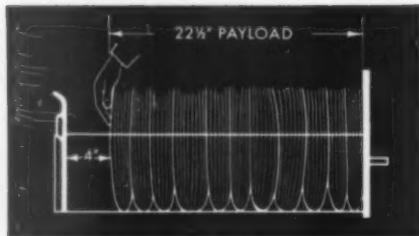


right package for you!

TAILOR-MADE
PACKAGE SERVICE

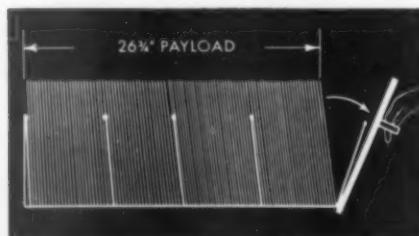


GF metal business furniture is a **GOOD** investment



THE CONVENTIONAL WAY

At least 4" of the 26 1/2" clear inside depth must be left unoccupied to allow working space, reducing filing capacity to 22 1/2".



THE SUPER-FILER WAY

Entire 26 3/4" inside depth is usable because automatic swing-front drawer provides necessary working space.

Superfiler[®]
costs less to buy
...less to operate

than any first-grade rigid front file

In Super-Filer you get, not just a filing cabinet, but a better, faster, space-saving method of handling business records.

Because of its exclusive swing-front drawer and V-angle spread, Super-Filer gives you more payload per dollar invested than any first-grade rigid front file . . . cuts operating time in half.

But that's just part of the story . . . Super-Filer saves valuable floor space, too. Each drawer contains 18 per cent more usable filing space than conventional files. And two

5-drawer Super-Filers contain as much payload as three 4-drawer rigid front files . . . yet stand only 4 1/2" higher. That's why we say Super-Filer can pay for itself in space saving alone.

Sounds incredible, doesn't it?

Make us prove it! Our representative will be happy to show you why Super-Filer is first choice of American business. Telephone your nearest GF dealer or branch office, or write for descriptive folder. The General Fireproofing Company, Dept. B-93, Youngstown 1, Ohio.



**GENERAL
FIREPROOFING**

Foremost in Metal Business Furniture

MODE-MAKER, GENERALAIRE, 1600 LINE DESKS • GOODFORM ALUMINUM CHAIRS
SUPER-FILER MECHANIZED FILING EQUIPMENT • SHELVING • PARTITIONS

GF metal business furniture is a **GOOD** investment

evidence to date indicates that a decline is due. Lehigh Valley RR's omission of its quarterly dividend may be an isolated instance. But the cutting of dividends by such corporations as Libby, McNeil & Libby and Illinois Central, and the substitution by Fruehauf Trailer Co. of stock for cash look like the beginning of a trend.

These cuts were not emergency measures. Instead, they were precautionary steps taken to protect cash positions at a time when earnings may be declining. This kind of prudence is dictated not so much by the stock market as by economic conditions. Companies that are put off from raising cash by the expense involved are forced to conserve cash by a variety of means. Most try to pare budgets before cutting dividends. But sometimes both methods must be used.

It's doubtful that there will be a substantial cut in regular dividends unless there is a big decline in economic activity. But a more cautious approach is likely on extra dividends, in either cash or stock. In bull market days, extras were so common as to be considered regular payments. This year, though, declining profit margins and fears about the future will cut down on yearend extras provided by corporations. And if business actually suffers a slump, this cautiousness would probably be followed by widespread belt-tightening that would cut regular dividends as well.

Effect on Sales—A downturn in the over-all dividend payout is a much greater direct deterrent to retail sales of luxury goods than a downturn in stock prices. When stocks turn down, investors are likely to pursue more cautious buying habits, particularly for nonessential goods. But such a decline does not necessarily imply an inability to buy; in most cases, investors have only lost paper profits, not any actual cash. If dividends are reduced, however, it will definitely have an impact on retail sales, because it will mean less actual money being disbursed.

Dividends have not yet suffered a reduction of any magnitude. In fact, during the first half of 1957, dividend payments were running slightly ahead of last year's figures. But the fourth quarter normally is the largest. The decline in corporate profits has already produced dividend cuts; it's likely to bring about a reduction in extras, and it may also indicate a sizable reduction in total dividend payments during the balance of the year. Dividend payments are only a marginal factor in total personal income, amounting to about 4% of total personal income before taxes. But dividends play a significant role because they tend either to stimulate or slow total consumer spending. This year, it seems clear that they will not

be a stimulus, at least not to luxury goods sales.

Disposable income is still increasing, so retail sales should continue strong. But a decrease in dividend payout may produce a cut in auto sales as well as in luxury goods. This was the case in 1937. There is no firm correlation between stock market fluctuations and sales of autos, but many dealers believe that any time the market suffers a significant drop, sales fall off. This is particularly true of expensive cars, just as it is of high-priced furs and jewelry.

- Downward Push**—A cut in dividends can also lead to a further decline in stock prices. When bull market psychology is rampant, investors and speculators buy stocks in hopes of getting higher dividends or extras, thus pushing stock prices up. But in bear market psychology, the emphasis is usually on protecting yields, so that when a dividend is cut, the stock price normally goes down even farther.

Investment Funds Keep Buying Despite Decline

Despite the sharp decline in the stock market last month, the nation's investment companies didn't shy from purchasing common stocks. For example, a survey by the National Assn. of Investment Companies of 46 mutual funds, representing 79% of the industry's assets, revealed common stock purchases totaling \$61.5-million in the first 21 days of October, compared with sales of \$22.1-million.

The funds are traditionally reticent as to just what stocks their professionals buy and sell. Outsiders get their only peek through the required quarterly reports. Last week, though, Arthur Weisenberger & Co., an investment house that has long kept close tabs on the investment companies, came up with a study of third-quarter activities of 10 big trusts—six open-end and four closed-end.

The disagreement between the trusts was striking. Two investment companies split on steels—one substantially reduced holdings in Armco, Republic, and Bethlehem, while the other bought Armco, Republic, and U.S. Steel. Two companies bought International Business Machines, and two sold it. One trust added 2,000 shares of National Cash Register; another sold 8,700.

But there was strong buying interest by all hands in such "defensive" groups as bank, finance company, and drug stocks. And there were other signs of caution. Seven of the 10 funds showed cash positions up 1 to 3 percentage points. One of the funds made no third-quarter purchases at all and confined its market operations to selling. **END**



for sure,
low-cost protection...

S. S. White
QUALITY
PLASTIC PLUGS
AND CAPS



Something as small as a plastic cap can give you amazingly big protection during shipping . . . storage . . . production. S. S. WHITE Plastic Plugs and Caps SEAL against dirt, moisture, loss of fluids or lubricants . . . PROTECT against damage to threads. They can't be mis-applied . . . are rugged and non-shredding . . . easy to install or remove. They cost you very little, but pay big dividends in customer satisfaction, reduction of repair and servicing work. S. S. WHITE Plastic Plugs and Caps are available in a wide selection of standard sizes—plain or threaded. For literature and samples, just write to

S. S. White

S. S. WHITE PLASTICS DIVISION
10 East 40th Street, New York 16, N. Y.

Western Office:
1839 West Pico Blvd., Los Angeles 6, Calif.

In Business Abroad

Ex-Official of Coal & Steel Community To Take Over as Bonn's Finance Minister



Franz Etzel (picture), retiring vice-president of the European Coal & Steel Community, will soon take over West Germany's Finance Ministry. He replaces Fritz Schaeffer, who is being nudged into a newly created post of federal treasurer and vice-chancellor.

Chancellor Konrad Adenauer respects Schaeffer's accomplishments—hardening the D-Mark and curbing domestic inflation. But he has long considered Schaeffer too miserly with the Federal Republic's reserves, too insistent on high corporate taxation, and, generally, unaware of the needs of a dynamic economy. Schaeffer's shift enhances the cabinet role of Economics Minister Ludwig Erhard.

• • •

Sputnik's Own Satellite: It's Likely To Be Broader U.S. Aid and Trade

U.S. foreign economic policies may shift under the influence of Sputnik. Officials who right along have been urging more aid and freer trade, now are getting a better hearing than a few weeks back. And Vice-Pres. Nixon, an advocate of aid for underdeveloped countries, is to have a big role in preparing next year's program.

The Administration definitely will ask for more economic aid for underdeveloped countries—particularly for the Middle East—than it requested last year. It will back more aid to hard-pressed India—either as part of the regular aid program or in special legislation.

As to foreign trade policy, Pres. Eisenhower will ask Congress to extend the reciprocal trade program for five years instead of three, and will call for substantial new authority to cut tariffs.

• • •

India Relaxes Rules to Get \$2.1-Million Johnson & Johnson Plant

Johnson & Johnson has announced a \$2.1-million manufacturing operation in India. The plant, scheduled to go into production in 1959, will manufacture surgical dressings and baby products.

The announcement marked a departure from Indian government policy, since the U.S. parent will hold 75% of the equity. Hitherto New Delhi has insisted on

MORE NEWS ABOUT BUSINESS ABROAD:

- P. 108 France stumbles in forming government, economic crisis continues.
- P. 112 Talented, young American woman plays the principal role in Japanese silk comeback.
- P. 116 Guatemala settles down after election fails to establish line of succession.

major shareholding by Indian investors. India's Controller of Capital Issues has apparently relaxed the rule in the current effort to encourage more foreign investment.

• • •

Canada Makes First Direct Bid

To Sell Wheat in Red China

The Canadian government—for the first time—is making direct overtures to Communist China to try to get Peking to purchase some of Ottawa's huge wheat surplus.

A two-man Canadian trade mission will be in Peking early this month to talk about possible wheat sales, and trade in general. Although Canada does not recognize the Peking government, Canada has been trading with Red China in a small way. But no wheat has been sold to mainland China since 1949.

The decision to send the delegation into China—they are regularly based in Hong Kong—was made last summer shortly after the new Conservative government took office.

• • •

Russia Steps Up Sales of Gold—

No One Seems to Know Quite Why

Soviet Russia has reentered the Western European gold market with heavy sales in Zurich, London, and some other Continental markets. It's the first substantial sale of Russian gold since last winter when London sources believe Moscow sold some 200 tons in a series of deals ending last May.

There is no obvious reason why Soviet gold sales would be expected now.

• • •

Los Angeles Edges Past Philadelphia

As Second Port of Entry for Imports

Los Angeles has now nosed out Philadelphia as the second port of entry for imports to the U.S. That's the weight of statistics produced by the U.S. tariff officials for last year. Los Angeles Port officials say that 1956's total of about \$60-million—excluding bulk oil—marked a general increase in all cargo. About half of the total was made up by 10 major imports—copra, bananas, molasses, crude rubber, pipe tubing, newsprint, veneers and plywood, steel wire, autos, and lumber.



Hot slab rolling mill

One way "to keep 'em rolling"...

Never take electrical power for granted!

The vital nerve center of every steel mill is its vast network of electrical control and power circuits—wires and cables *that must not fail*.

Since the insulation is the heart of the cable . . . and since only Okonite (insulation specialists since 1878) produces cables by all four insulating methods: strip, dip, extrusion and taping . . . our engineers are in a completely unpreju-

diced position when it comes to recommending the right type of cable for your circuit.

Don't wait for expensive electrical failure to prove to you that—in cables—the only bargain is absolute reliability.

For a frank, down-to-earth discussion on cable insulating methods, write for Bulletin BW-1106-I, The Okonite Company, Passaic, N. J.



where there's electrical power...there's **OKONITE CABLE**





President Coty: "I believe they are all thinking of one particular man."

Finis in Combat, Paris

Coalition Bid in France Flops

Mollet's defeat leaves the country leaderless after nearly a month, and plunges it even deeper into economic chaos.

Early this week, Socialist Guy Mollet formed a star-studded cabinet of top political leaders to pull France out of its worst crisis since the end of World War II. Like three politicians before him, he failed to win approval from the National Assembly.

That meant even more delays and even more political shenanigans before France—already leaderless for a full month—patches together its 24th post-war government. At midweek, it looked as though 38-year-old Felix Gaillard, Finance Minister in the caretaker government of Premier Bourges-Maunoury, would be next in line to try what seems impossible—forming an acceptable government.

Yet the economic crisis has reached such proportions that the main question this week is not what a new government will look like, but whether any government in France can bring order out of the near-chaos.

One measure of France's economic plight is its woefully bad trade position. Despite partial devaluation of the franc in August, imports have continued at a high level, while exports have climbed only slightly. Last weekend, in an extraordinary move, the caretaker government of Premier Bourges announced full-scale devaluation to plug the huge flow of imports.

• **Time Is Running Out**—Mollet's program, sketched out earlier this week, hardly looked like the stiff dose of medicine the French economy needs. He called for a \$476-million cutback in government spending to reduce the budget deficit to \$1.4-billion. He indicated he would seek new advances from the Bank of France—though this would have inflationary effects. He hopefully

talked about loans from foreign sources—presumably from Bonn or Washington.

Mollet's defeat pointed up—once again—the narrow-minded rivalries of France's fragmented political parties. But it also reflected the fact that the French people themselves, at the local level, can't agree on how the country should go about tackling its economic crisis—if there is any basic interest in tackling it at all.

Actually, the problems for the new government are pretty much what they were six months ago. The main difference is that time is running out.

The irony is that Mollet—during his former, record-breaking term as premier—helped create the very problems he was asked to solve. And the problems look almost insurmountable.

• **Economic Mess**—On the domestic front, inflation roars unchecked—despite recent attempts at price controls. The French Treasury is scraping the bottom of the barrel. Over the past two weeks, trade unions and workers have broken out in a rash of violence against economic conditions—capped by last week's nationwide walkout of transport workers. While there is prosperity on the surface, the country basically is in no position to pay its bills, domestically or to foreign creditors.

Contributing to the economic mess is the big, unresolved question of Algeria. The French government is paying out nearly \$2-billion yearly to fight this three-year-old rebellion. The strain on France's financial resources has reached the breaking point. Yet the bulk of Frenchmen, so far, have been unwilling to accept any belt-tightening measures

in order to help meet the costs of Algeria.

• **Side Effects**—Inside France, the economic crisis has had some nasty side effects. By not taking firm action, the government has played into the hands of the Communists. Already they have made an opening wedge by fomenting strikes around the country.

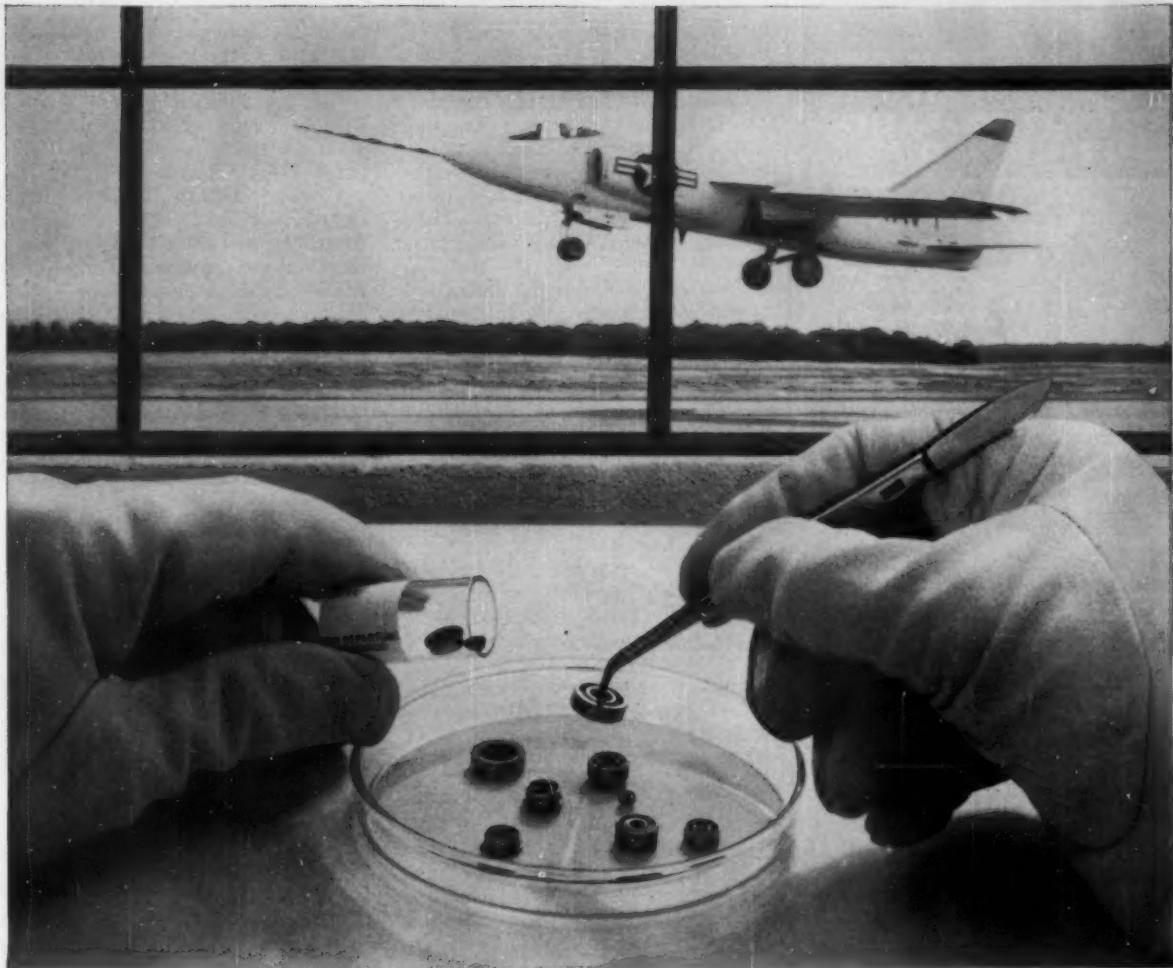
Outside France, there have been repercussions, too. France's five partners in the newly created Common Market have been wondering whether the economic mess in France may temporarily slow down implementation of this agreement to reduce tariff barriers.

Beyond that, Washington is impatient over Paris' fumbling approach to an Algerian solution. It is quietly pressuring the French government to make some compromise with the rebels—partly to counter-balance recent setbacks in the Middle East. New pressure will come from the United Nations when it begins airing the Algerian question soon.

• **Causes**—What has made these economic and political problems appear almost unmanageable is France's inability to make a success of government under terms of the Fourth Republic constitution.

Since the war, the country has had 24 governments—a new cabinet every six months on an average. Top politicians have talked reform many times before. Now, after four weeks without a government in a time of severe crisis, political leaders see some reforms in the cards. The possibilities include an electoral reform to reduce party factionalism and the Communists' voting power, and constitutional reforms to give the premier more executive powers.

Mollet's new government already had been called "the winter cabinet," which implies that no one, including Mollet



It certainly is a small world!



*turning point
of modern
industry*

Aircraft and missiles are shrinking our world! And as speeds and distances increase, component guidance parts become smaller. Yet, accuracy and reliability must reach new highs. For this reason New Departure's complete line of miniature instrument ball bearings is of great importance to leading aircraft and missile manufacturers. And deservedly so! For every step of ultra-precise manufacture . . . from initial research to final packaging in surgically clean surroundings . . . assures performance to fill the most exacting need.

If your engineering problem is dimensionally small, call on the services of a New Departure ball bearing engineer. He has the complete facts on miniature ball bearings at his fingertips.



NEW DEPARTURE • DIVISION OF GENERAL MOTORS, BRISTOL, CONN.

NOTHING ROLLS LIKE A BALL



**RESTRICTED
SPECIFICATION
COLD ROLLED
STRIP STEEL**



**Serves Typical
Low Carbon
End Use
Requirements
Such as these...**

SIZE 8 x .045

ANALYSIS 1010

FINISH #2 finish

HARDNESS Non-Scaling quality

THICKNESS $\pm .0005$ incl. crown

TOLERANCE $\pm .005$

WIDTH 250 \pm per inch of width

COIL SIZE Skidded

PACKAGING



SIZE 12 x .032

ANALYSIS 1010

FINISH #2 finish

HARDNESS #4 Tempered

THICKNESS $\pm .0005$ incl. crown

TOLERANCE $\pm .005$

WIDTH up to 200 \pm per inch of width

COIL SIZE Paper interleaved—skidded and shrouded

PACKAGING



SIZE 4 x .065

ANALYSIS 1010

FINISH #2 finish

HARDNESS #3 Tempered

THICKNESS $\pm .0005$ incl. crown

TOLERANCE $\pm .005$

WIDTH Cut lengths

COIL SIZE Skidded

PACKAGING



Many times, by varying processing methods, J & L is able to develop properties in cold rolled strip steel which greatly facilitate production operations and/or give the product superior qualities without adding to end product cost. End result is lower costs through improved products or better assembly and improved yield.

We believe you will find it worthwhile to investigate the possibilities of J & L Restricted Specification Cold Rolled Strip Steel applied to your production.

THE 4 IN 1 SOURCE FOR COLD ROLLED STRIP STEEL
Now there are four J & L plants with facilities for production of "Restricted Specification" cold rolled strip. Strategic locations at Youngstown, Indianapolis, Los Angeles and Kenilworth, N. J., provide the security of 4 sources of supply plus the close working relationship which these local production centers make possible.

J & L STRIP STEEL DIVISION PRODUCTS
Low Carbon, High Carbon, Annealed or Hardened and Tempered Spring Steel, Electro Galvanized or Hot Dipped Continuous Galvanized, Tin Coated, Alloy, Stainless.

Jones & Laughlin
STEEL CORPORATION
STRIP STEEL DIVISION
GENERAL OFFICES: YOUNGSTOWN 1, OHIO
Plants: Youngstown • Indianapolis • Los Angeles
Kenilworth, New Jersey
FORMERLY COLD METAL PRODUCTS COMPANY

himself, expected it to last more than four months—at the most. But Mollet had assembled a high-powered team that reflected the emergency nature of his assignment. The cabinet contained 22 full-fledged ministers representing eight parties in the National Assembly. An unusual feature was the so-called inner cabinet that included four former premiers—Robert Schuman, Henri Queille, Edouard Daladier, and René Pleven.

• **Socialists' Line**—On the crucial economic issue, Mollet, whose Socialists tend to favor taxes and price controls, compromised with the conservative Independents who prefer budgetary cuts and credit restrictions. Thus, former Finance Minister Felix Gaillard—the man who tried to make a go of "austerity" through controls—was to be Commerce Minister under a new economic overlord, Pierre Pflimlin of the center Catholic MRP.

On the Algerian issue, the composition of Mollet's cabinet indicated that there were no major policy shifts in the making. As premier before, Mollet followed a tough line on Algeria. Bourges-Maunoury, his successor, tried a measure of home rule for Algeria. This brought down his government. But, despite pressure for a liberal solution to Algeria, Mollet kept Christian Pineau, Foreign Minister, and Robert Lacoste, the tough minister of Algeria, as holdovers in his cabinet.

• **No Repeat**—The economic situation today is nothing like what it was in February, 1956, when Mollet became premier. Then, the economy was expanding in a reasonably healthy manner. Mollet financed imports of raw materials for booming industry by drawing down France's record-high foreign reserves. When Mollet's high-spending policies brought on galloping inflation, he strained the Treasury by increasing food and housing subsidies—and enlarging the social security program.

The Bourges government switched economic policy from full-steam-ahead expansion to austerity. Partial devaluation helped cut back imports. But living costs continued to soar out of sight.

Last week's full devaluation came earlier than expected. What forced it was the sudden rush of steel imports—much more than industry needs now or in the near future. But industrialists, anticipating full devaluation, placed heavy orders—and contributed heavily to further decline in France's trade balance.

While devaluation may put a crimp on imports, it's adding to the already rapid rise in living costs. The price of cotton and coal is likely to go up 5%. The price of gasoline, now \$1.10 a gal., is certain to increase. Unless the foreign

exchange situation improves, the government may be forced to set up some sort of rationing system on raw materials.

• **Bleak Picture**—Government economists and officials of the Bank of France briefed political leaders last week on the bleak economic picture ahead. Here's their story:

• The French Treasury hasn't enough funds to meet its demands between now and the end of the year. It can't very well issue new Treasury bills because it can't even meet the Nov. 15 payment on a \$119-million short-term loan borrowed from the Bank of France last spring.

Some civil servants have been warned of "slight delays" in getting their paychecks. The government owes the state-controlled aircraft industry—as one example—about \$29-million in overdue payments.

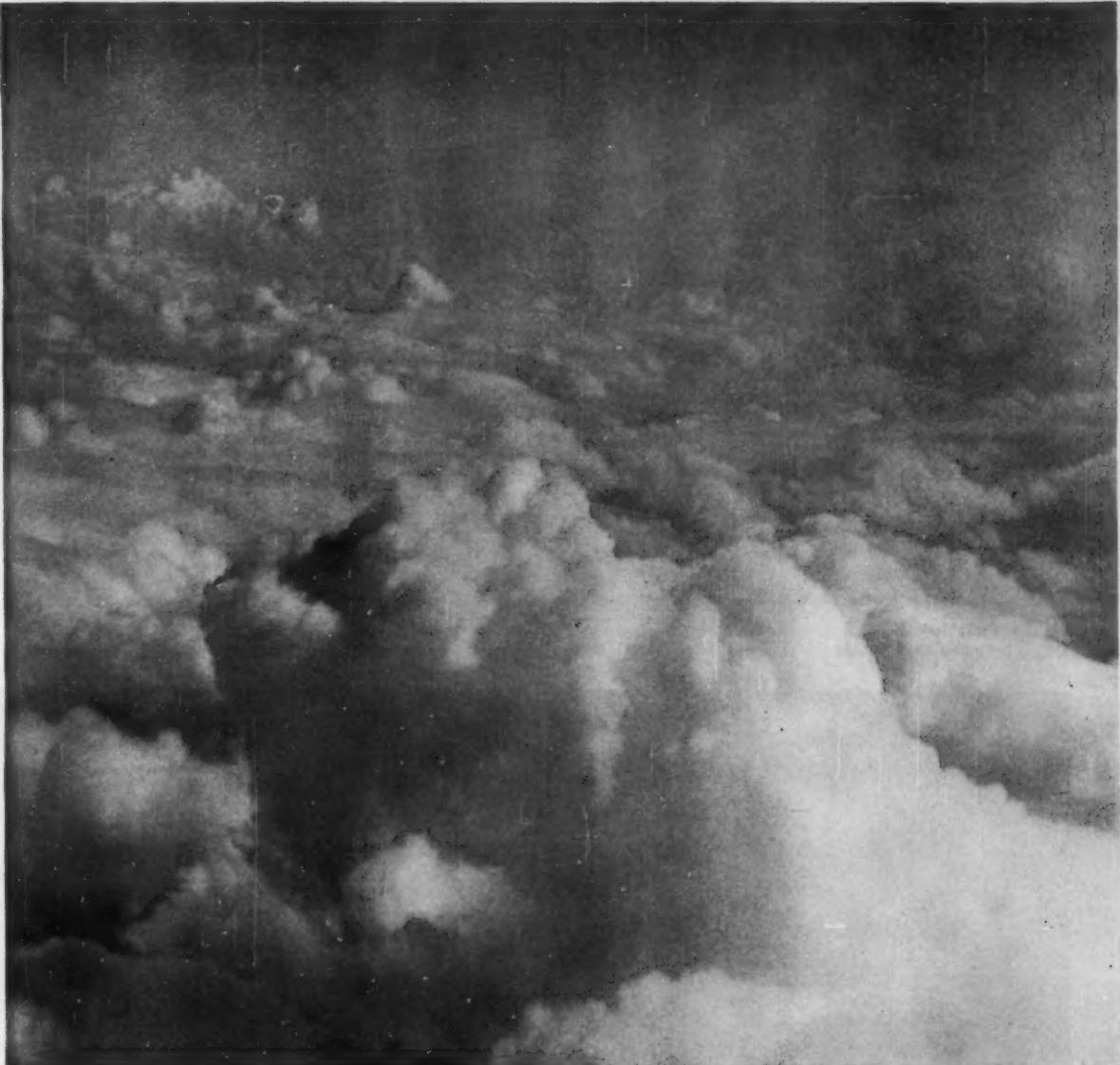
• Foreign exchange reserves are down to \$476-million. Borrowings that the Bank of France made last summer are just about gone. Bank officials insist that stopgap measures must be taken immediately—possibly including rationing.

Economists also figure France will need a foreign loan of as much as \$500-million to tide it through the exchange crisis. It looks as though a new French government—once it makes some firm domestic moves to shore up the economy—will go to Bonn for a loan. Bonn is likely to come through with a sizable chunk of money.

• **Political Stability**—The crucial, long-term problem French politicians will have to tackle is how to engineer greater political stability at the top. A French national election—such as the one last year—doesn't really decide what parties hold power. It merely provides political raw material out of which a majority must be shaped. With 14 different parties, most French majorities are—at best—a patchwork affair. Roughly a third of the 596 deputies in the National Assembly—Communist and Poujadists—are openly hostile to almost any government made out of the two-third balance in the center.

Over the past few weeks, the political pendulum has swung from the Socialists on the left to Antoine Pinay and his conservative Independents on the right. After the Socialists defeated Pinay's attempt to form a cabinet, Pinay's party this week bolted from his leadership and refused to back Mollet and the Socialists. That leaves the Catholic MRP under Pflimlin—which supported both Pinay and Mollet—as a possibility for forming a new government.

But still another coalition is hardly the full answer. A new government must make an attempt to smooth out the basic flaws of French parliamentary government, which have helped create the present crisis. **END**



You're looking at low-cost warehouse space

How Emery Air Freight Helps Cut Distribution Costs



A nationally-sold product is now distributed through 3 warehouses instead of 46...because of Emery Air Freight. By using air freight in everyday operations our customer lowered his warehousing costs yet was still able to maintain fast customer service.

With Emery you can ship overnight from coast to coast. Overnight by surface transportation is limited to only 400 miles. As a short-cut to national

distribution or procurement, air freight saves time and money.

Of course, any emergency shipment moves better by air. But there are also important savings when you "plan in" air freight with its tremendous speed, such as in reducing high warehousing and inventory costs.

Find out exactly how nationwide Emery Air Freight door-to-door service can fit into your over-all operations.

EMERY AIR FREIGHT CORPORATION

General Offices: 801 Second Avenue, New York 17. Serving the United States, Alaska, Canada . . . and Europe, Asia, Africa.



MARION TILTON, the only U.S. textile buyer who lives permanently in Japan, visits Tokyo's stores in search for new designs that can be adapted for the U.S. market.

The Woman

Marion Tilton talked two U.S. companies into making their silks in Japan, introduced U.S. standards to Japanese.

Last week a tall, blond, attractive American woman was making her usual rounds of Japanese silk manufacturers (pictures), even sitting in on a geisha party with businessmen clients. At first glance, Marion Scott Tilton might seem out of her element—halfway across the world from New York's 7th Avenue and American fabric markets.

But Mrs. Tilton, Far East representative of Cohn-Hall-Marx Co. (Cohama), fabric importers and converters, and Baar & Beards Co. (B&B), prominent U.S. neckware manufacturers, is an important part of Japan's flourishing industry. In no small way, the efforts of this New York fashion expert helped lift silk production from something insignificant in 1946 to 187-million sq. yd.



Behind Japan's Comeback in Silk



IN VISIT to mill town, Mrs. Tilton looks at items made for sale in America.



AT BUSINESS MEETING, Mrs. Tilton gives mill orders for fur and pearl neckpiece.

BUSINESS WEEK • Nov. 2, 1957

Business Abroad 113



SILK SCARVES, printed by hand screen, are checked by Mrs. Tilton, who enforces rigid standards to make sure the products turned out are top quality.



IN SEARCH of new ideas, Mrs. Tilton often visits Tokyo Silk Road Society, which promotes Japan's textiles abroad.

JAPANESE-STYLE bath—in a wooden tub—is standard for Mrs. Tilton when she travels outside Tokyo to Japanese mill towns.



AMERICAN-STYLE dancing, at Tokyo club, is a favorite diversion for Mrs. Tilton, who only three years ago was polio victim.

last year. About 25% of this went to overseas markets—and of all exports, more than half were sold in the United States. Today—unlike prewar—a growing amount of these American-bound goods are processed in Japan. Much of this is “high-style”—patterns and colors pegged to the latest New York and Paris dictates.

• **Introducing “High Style”**—Mrs. Tilton almost singlehandedly introduced “high style” to Japanese silk manufacturers. She convinced the Japanese that they must overcome their conservatism, bred of 1,500 years of silkmaking, and start making silk according to American fashion requirements. How well she has succeeded can be told in simple statistics: A shoestring business she started in the immediate postwar period has now turned into a \$12-million-a-year operation, and it's still growing.

The job she has done has been important to the Japanese as well as to Mrs. Tilton and her U.S. sponsors. At the end of World War II, few Japanese industries were as badly off as silk. Most silk mills had been dismantled for scrap. More important, the era of the silk stocking was over. Even the centuries-old Japanese silk kimono seemed headed for oblivion with poverty and Western influence destroying its hold.

• **Government Job**—Mrs. Tilton, who

had come to Japan as a Red Cross worker after World War II, was hired by the U.S. Occupation authorities to help put the silk industry back on its feet. It was her job to determine silk policies that would turn out the traditional kimono and cheap silk cloth for export. Mrs. Tilton soon became convinced that there was room for a third sector in the industry—high-grade silk for export. Indeed, she decided that was the only way to give the industry any long-range stability.

To get Americans interested in Japanese silk, she took an elaborate Japanese silk exhibition—complete with 12 tons of fabric, a traditional Japanese loom, and a kimono-silk weaver from Kyoto—on a tour of the U.S. in 1948.

• **Business Deals**—While in New York, Mrs. Tilton sold Cohn-Hall-Marx on the idea of producing high-quality finished silk fabric with cheap Japanese labor in Japan. She returned to Tokyo, resigned her government job, and took over as Cohama's Far East representative. A few months later, Mrs. Tilton met Milton Beards of Baar & Beards, the U.S.' largest importer of scarves and other neckwear. Soon, she was painting a second company name on the office she set up in an abandoned, bombed-out building.

• **Plenty of Problems**—The going hasn't been easy. For one thing, Mrs. Tilton



Formica

helps solve rocket thermal insulation problems

New Formica laminated plastic thermo-insulator provides protection from hot launching gases

In cooperation with Rocket Fuels Division, Phillips Petroleum Company, Formica application engineering applied Grade FF-34 (modified) with the precise characteristics for protection against hot gases. This Formica fabricated liner protects the steel blast tube through a time cycle of intense heat in a new target drone.

This solution called for three of the Formica-4 services that assure the right laminated plastic for every requirement.

1. Application engineering to select the right grade
2. Research to adapt it to this particular application
3. Fabricating to produce a complete component ready for assembly. A fourth—Customer Stock Service—provides a ready supply of sheets and rods for prompt shipment.

This unique laminated plastics service can be of assistance to you in your own product design problems. For complete information, send for free Formica-4 bulletin 584. Formica Corporation, a subsidiary of American Cyanamid, 4505-7 Spring Grove Ave., Cincinnati 32, Ohio.

Save your engineers' time . . . use Formica-4,
the complete laminated plastics service



1. Application Engineering 2. Research 3. Fabricating 4. Customer Stock Service

FI-1586



LOUIS DE ROCHEMONT

"Paper, like background music for a motion picture, helps strengthen an impression, convey an idea. This fact alone requires that it be chosen carefully."—Mr. de Rochemont, producer of "Cinorama Holiday," pioneers a new film technique in "Cinemiracle Adventure."

Better papers are made with Cotton Fiber*

You buy with confidence when you specify cotton fiber papers. Confidence in their prestige-building beauty, greater durability, and outstanding all-around performance. These traditional qualities are the product of premium fiber, highly specialized processes, and crafting skills that have endured for generations. Whenever fine quality is a requirement, cotton fiber papers are your best buy.

YOUR SUPPLIER KNOWS

... why papers made of cotton fiber (25% minimum to 100% in the best grades) perform better in a variety of uses. Ask him about cotton fiber business and social stationery, indexes, ledgers, onion skin, drawing, tracing, blue print and other papers.



*LOOK FOR
"COTTON" OR "RAG"
IN THE WATERMARK
OR LABEL

©Cotton Fiber Paper Manufacturers, 129 E. 42 St., N.Y.C.

has had to do some tall persuading to win over the U.S. companies she represents. For example, B&B has had to lay out as much as \$1.3-million to finance the Japanese production each spring. Since these fabrics were not destined for sale to American women until the following winter, the fashion element has been of critical importance. And there have been many other problems—overcoming a shortage of weavers, enforcing American standards of quality, changing traditional methods of production that conflicted with American specifications (width of fabric, for example).

Mrs. Tilton has worked through Gunze Trading Co., a Japanese company that still handles most of her business today, which supplied raw silk and weavers. She preached quality and modern methods, lecturing, scolding, browbeating, and pointing up individual mistakes.

• **Tough Inspector**—Abbot Copeland, Mrs. Tilton's boss at Cohama says: "Mrs. Tilton is a rational kind of person who can hold her peace. But she can blow up, too, when necessary, and the little weavers are scared of her." Today, thousands of workers in 35 weaving mills and six printing establishments are turning out items for Mrs. Tilton equal in quality to the best silk goods made in the U.S. and Europe. Mrs. Tilton and Gunze keep

eight inspectors busy to see that the standards are maintained.

Several other U.S. importers have recently started purchasing Japanese textile items tailored to American needs. They also work through local trading companies. But Mrs. Tilton is still the only U.S. textile buyer permanently stationed in Japan.

Many Japanese wonder at Mrs. Tilton's drive and energy—especially the men who are used to shy and retiring women. Actually, they often treat Mrs. Tilton, a divorcee, like a man, inviting her to geisha business parties. Yet they admire her feminine taste and fashion knowhow.

Her artistic talent dates back to her days at New York University, which she attended on an art scholarship in the mid 1930s. She also attended Pratt Institute, the University of Wisconsin, and New York University's textile design courses.

• **Iron Will**—Mrs. Tilton's drive has done more for her than make her a success in Japan. Three years ago she lay in a Calcutta hospital stricken by polio. The doctors doubted that she would ever recover. But she spent hours each day trying to walk, crawling when she couldn't, and finally pulled through. Her remarkable recovery over this personal handicap parallels the postwar reconstruction of Japan's silk industry—largely due to Mrs. Tilton's leadership.

Guatemala Back to Status Quo

With a provisional president in office after a military junta, the country will now try again to elect a chief executive. Meanwhile, U.S. investments seem safe.

This week Guatemala, a bellwether of Central American politics, seemed to be settling down after a whirlwind week of political upsets. And the State Dept. and U.S. investors were hoping that the touch-and-go situation would smooth out quickly.

What happened last week looked—at first—like an upside-down version of 1954, when Col. Carlos Castillo Armas overthrew the anti-American, pro-Communist regime of Pres. Jacobo Arbenz Guzman. This time Gen. Miguel Ydígoras Fuentes, backed by reactionary rightwingers and indirectly supported by Communist sympathizers, tried to overthrow the pro-American president-elect, Miguel Ortiz Passarelli. It looked as though the substantial U.S. aid program since 1954 and the security of U.S. private investments in Guatemala were about to go out the door—for the time being.

Now the political situation is back where it was before the whole storm blew up. The country has a new provisional president to hold the fort until

elections are held again—to choose a man to replace Castillo Armas, who was assassinated last July. The only difference is that the man likely to be elected later is Ydígoras—an evidently pro-American politician who doesn't mind having a few leftwingers around to help him grab power.

• **What Happened**—Briefly, this is what took place in Guatemala last week:

Ortiz, chief justice under Castillo Armas, won the election staged by Provisional Pres. Arturo Gonzales Lopez. The State Dept. and U.S. investors were happy over the outcome. Ortiz had often advised Castillo on oil legislation and contracts with foreign companies. He is generally regarded as a staid politician, with few of the trappings of a caudillo-type strongman.

Ydígoras, his main opponent, claimed the election was being rigged weeks before the election took place. When Ortiz won, Ydígoras' followers rioted in the streets of Guatemala City. Ydígoras won the city vote; Ortiz, the rural

Announcing the car that puts your fleet

AHEAD FOR KEEPS...PLYMOUTH!

Look it over...drive it...check the facts and figures. You'll agree there's no catching Plymouth as *the* fleet buy for 1958!

Economy? You can bet that the thriftiness that makes Plymouth the reigning Mobilgas Economy Run Champion and the most popular cab in America is even better than ever. *This* time with a choice of five great engines so you can "custom-tailor" to *your* fleet's requirements.

Prestige? Plymouth's famed Flight-Sweep Styling is further enhanced for 1958. Long, low, luxurious. This

magnificent new Plymouth is the kind of car your men are proud to drive. A terrific boost for morale!

Resale value? Here's one car that'll really pay off big when trade-in time rolls around. Resale figures on the 1957 model are just beginning to come in—and they're the highest of the low-price "3." And they're also a sure-fire indication of what you can expect from this greatest of all Plymouths.

Get all the facts today from your Plymouth dealer. You're sure to join the fleet owners who choose Plymouth for '58.



Star of the Forward Look...

Plymouth





HKP conveys an idea... and a mountain of pulp

A mile and a half of 48-inch-wide Quaker conveyor belting carries wet pulp to a new Crown Zellerbach paper mill. Quaker is the only industrial rubber concern with plants on the Atlantic (Philadelphia) and Pacific Coasts.

How to move a mountain of soggy wood pulp...enough to make 170,000 tons of paper a year? Crown Zellerbach Corporation, manufacturing paper bags, boxes and household tissue products in its new mill at Antioch, California, finds the best idea is to use continuous rubber conveyor belting—a mile and a half of it—zig-zagging from unloading dock to storage basin to processing plant. For this job the paper manufacturer uses rubber belting made by the Quaker Rubber Division of H. K. Porter Company, Inc. The Division's plant at Pittsburg, California, tailored a 48-inch-wide belt exactly to the paper mill's needs.

Similar Porter aid through products adapted to specific needs is available to other industries because of Porter's planned diversification...a program which offers the services of divisions manufacturing steel and fabricated steel products, copper-alloy metal products, electrical equipment, refractories and industrial rubber, wire and cable.

Porter's rubber division products include: conveyor, elevator and transmission belting; V-belts; industrial, fire and lawn hose; sheet packing, molded and extruded rubber products; plastic pipe and underground sprinkler systems.

H. K. PORTER COMPANY, INC.

CLEVELAND • CONNORS STEEL • DELTA-STAR ELECTRIC • HENRY DISSTON • RIVERSIDE-ALLOY METAL
LESCHEN WIRE ROPE • QUAKER RUBBER • REFRactories • VULCAN CRUCIBLE STEEL • W-S FITTINGS
H. K. PORTER COMPANY (CANADA) LTD.

vote. Close observers believe the rural vote may have been rigged. The Indians, who constitute about 65% of Guatemala's 3.2-million population, can be bought off easily.

When the police were unable to cope with mobs, the Army—which backed Ortiz—set up a junta. Ydígoras told the junta he would call off the demonstrations if it would nullify the elections. Ydígoras wanted to be named the temporary head of state. The junta, instead, called on Guatemala's Congress to install a provisional president.

• Successor—At midweek, Col. Guillermo Flores Avendano—the next in line under the 1956 constitution—was named interim president. Flores was the second vice-president under Castillo. Because his government is constitutional, the State Dept. reportedly will recognize Flores.

Flores favors Ydígoras. So there's a good chance he may get the backing of both the Army and the provisional government the next time around when new elections are held. Ydígoras claims Washington's friendship. But neither Washington nor U. S. investors are sure of Ydígoras' political and economic views.

Now 62 years old and a wily politician, Ydígoras has been waiting a long time for the top job. He was an Army officer under dictator Jorge Ubico, who ran Guatemala from 1931 to 1944. One major point in his favor—on the political side—is the fact that he tried to beat out Arbenz in the 1950 election, but before he got much of a chance, Arbenz threw him out of the country. Subsequently, when Castillo began putting through educational and land reforms in 1954, he "exiled" Ydígoras to Colombia as ambassador—presumably because of his reactionary policies favoring the big landowners in Guatemala.

• U. S. Stake—In any case, the U. S. has a big stake in Guatemala's future. Aid from the International Cooperation Administration and the military support program has amounted to nearly \$70-million in the past three years. This year's ICA aid of \$17.3-million is going mostly for two major highways and rural re-settlement.

As for private investment, U. S. holdings in Guatemala total about \$120-million. The biggest are the operations of United Fruit Co., International Railways, and Empressa Electrica—subsidiary of American & Foreign Power Co., Inc. W. R. Grace, Pan American World Airways, and several oil companies also have some investments.

Last week some liquid funds held by U. S. companies were flowing out of Guatemala, and tourist business was at a virtual standstill. But so far the political upheaval has caused more of a scare than a shock. **END**

The Big Advertisers



Their Advertising with Diamond Book Matches!



"Our buyers are highly impressed"

writes MR. ROBERT G. STEINKAMP, Advertising Manager, Roddis Plywood Corp.



"The personalized book matches we are using in our direct mail campaign get a warm reception from everyone. We're using two different book match designs and two packages. Imprinted with our prospects' initials, book matches are mailed regularly to architects who can specify our products. This 'Diamensionized' planned book match advertising program has given our advertising a new dimension and helps customers remember our name. We've had many 'thank yous' for these dignified, personalized book matches. This program will continue for a long time."

Whatever your particular need—for new prospects, new product promotions, brand name reminders, salesmen's aids and innumerable direct mail applications—there's a "Diamensionized" planned book match program to give your advertising an exciting, new dimension. For any dynamic book match advertising, call on Diamond Match, pioneer and leader in the field. Write on your business letterhead for folders describing modern, new techniques in "Diamensionized" book match advertising.



your advertising with a



*planned
book match advertising program*

Book Match Advertising Dept., THE DIAMOND MATCH COMPANY, 125 Paridon St., Springfield, Mass.

In Management

Young Donald Douglas Takes Controls Of Aircraft Company Built by Father

Donald W. Douglas is one of the few men who has been able to build a multimillion-dollar company and then stay in the saddle (BW-Jul.16'57,p82). And last week, when he began to relinquish control of Douglas Aircraft Co., Inc., it was to another Douglas—Donald W. Douglas, Jr. (picture). After years of grooming, the younger Douglas has now assumed the presidency. He started work in flight test engineering, moved later to military sales. In 1951 he became vice-president for military sales, in 1953 a

director, and last April a member of the company's executive committee. As a backstop for the new president, Douglas, Sr., is remaining as chairman of the board and chief executive officer. Frederick W. Conant, the company's senior vice-president (and, like Douglas, Sr., 65 years old), was elevated to the new post of vice-chairman of the board. In the absence of the elder Douglas, he will function as chief executive officer.



Company Research Staffs Clamor For More Rapport With Management

With a bet of more than \$8-billion riding on private research this year, U.S. corporations are increasingly attentive to the problems of managing research—and still more attention is badly needed. At least, that's what a series of studies by Booz, Allen & Hamilton, Chicago management consulting concern, indicates.

If companies want the most from their research dollar, says BA&H, they must bring researchers back from the limbo into which so many have been plunged and integrate their operations with the company's (BW-May 17'57,p107). Contrary to popular myth, this is just what the research staff wants—more contact and guidance from top management and close day-to-day contact with manufacturing and sales personnel.

In a survey of attitudes among 3,500 researchers in 23 companies, Booz, Allen found that only 4% of them are really working on basic exploratory studies, even though the very management that pay their salaries may say and believe differently. The rest are deep in applied research or in product development projects of direct impact on their companies.

Despite the fact that the researchers' main efforts are centered on current company problems:

MORE NEWS ABOUT MANAGEMENT ON:

- P. 125 Stock option plans for the brass: market dip or no, they're here to stay.
- Some 58% of them feel their labs are poorly run and organized.
- A full half of them say they don't know what performance standards are expected of them.
- They have little contact with management or knowledge of long-term company objectives. As a result they often start projects of little value to the company.
- Contact with other departments are either marginal or poor, say 79% of the researchers.
- Although they work on product development, 41% of the research people feel they're inadequately acquainted with the strengths and weaknesses of the company's present products—which they're trying to improve or supplant.

In part, this gap is due to the newness of private research. Relatively few companies did any until the Korean War. And managers unfamiliar with science have doggedly kept hands off research projects to avoid publicly exposing their lack of knowledge in this area, say some researchers.

• • •

Survey Finds Company Committees Catch On as a Management Tool

Management by committee is evidently on the rise. Two-thirds of 79 companies surveyed by the American Management Assn. say they make more use of committees now than they did as recently as five years ago.

The trend is especially strong among small and medium-sized concerns. In this group, some 75% report an increase; only about half of the major corporations can say the same.

But despite their rising popularity, committees aren't taking over the job of making decisions. In most cases, they are used for coordinating, for training, and for communicating ideas—such as to acquaint top management with the thinking of key executives.

• • •

Science Urged as Proper Study For Students of the Liberal Arts

Liberal arts colleges—many of which suffer a shortage of cash and prestige—often fall down on their job by ignoring the sciences, says Pres. John T. Rettaliata of Illinois Institute of Technology.

In the past, most scientific effort may have been primarily of interest in the laboratory, he says. But now almost all research is applied, and it affects everyone's life more and more. He suggests that an understanding of science and its effects cannot be excluded from the liberal arts program, which aims to give students a grasp of the significance of tradition and history.



Add it all up—stays sharper longer
writes 16,230 words
popular Pink Pearl eraser

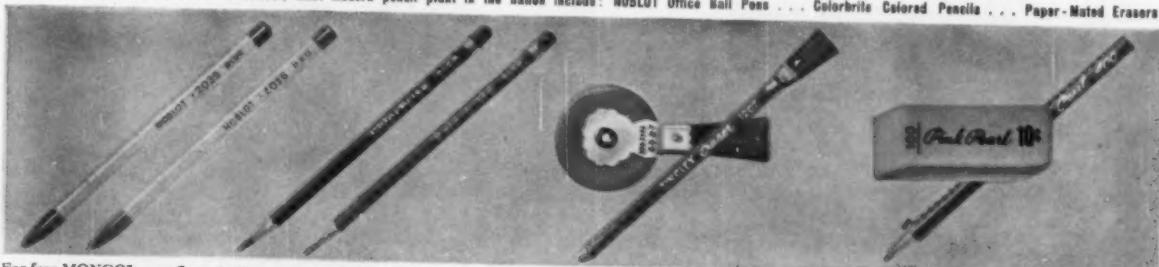
IT'S MONGOL
THE GREATEST PENCIL VALUE IN AMERICA TODAY

Since
1849

EBERHARD FABER
WILKES-BARRE, PA. • TORONTO, CANADA

puts its quality
in writing

Other famous products made in the newest, most modern pencil plant in the nation include: NOBLOT Office Ball Pens . . . Colorbrite Colored Pencils . . . Paper-Mated Erasers



For free MONGOL pencil—write in on your company letterhead

Trademarks Reg. U.S. Pat. Off.



ORIENT HIM

Orient a helicopter pilot in zero visibility. The problem, complicated by his ability to hover and to fly vertically, backwards, and sideways was being solved by many instruments. To simplify the "blind flying" panel, the Navy asked Waldorf Instrument Division of Huyck (pronounced Hike) to design a one instrument system for automatic navigation.

Waldorf designed, engineered, and now produces a single instrument that tells the pilot his position in space: his attitude, altitude, rotor pitch, rate-of-turn, bearing to destination, direction to fly, distance in miles, and when to fly up or down, left or right to make a perfect instrument approach. All this the pilot reads at a glance on the six-inch diameter face of an instrument weighing a small fraction of the six instruments it replaces.

This is one example of Waldorf's contribution to the science of automatic navigation. Waldorf also engineers and manufactures complete systems and instruments in the fields of hydraulics, electronics, and electro-mechanics. These products include instruments, computers, precision controls, test devices, simulators, servo-mechanisms, valves and actuators for industry and the Armed Forces.

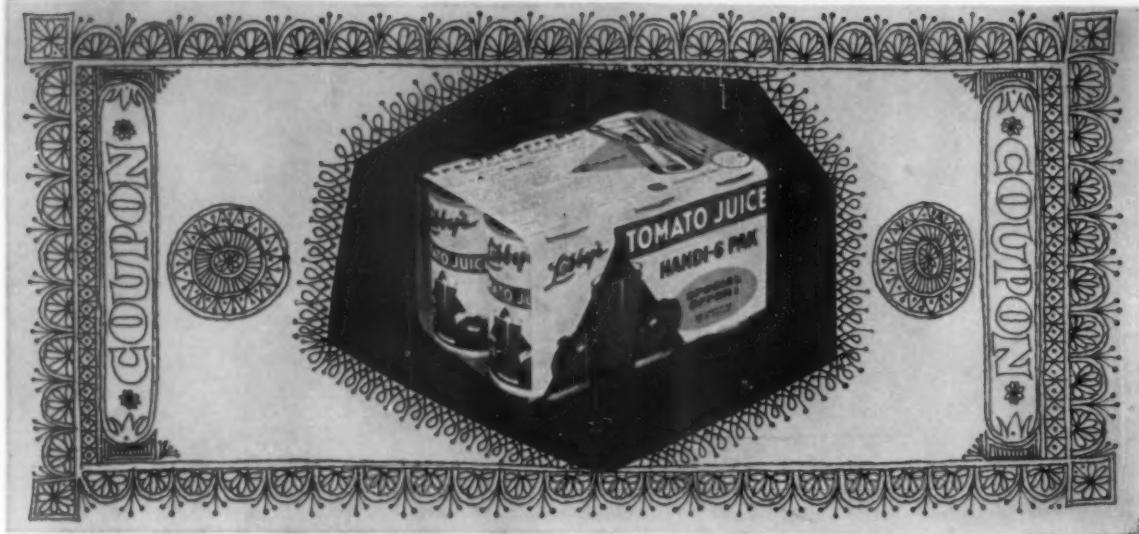
Waldorf will undertake creative solutions for your problems, military or commercial, in the development and production of precision instrumentation and controls. For brochure and further information write to Waldorf Instrument Co., Huntington Station, Long Island, New York.

**WALDORF INSTRUMENT
DIVISION OF
F.C. HUYCK & SONS**

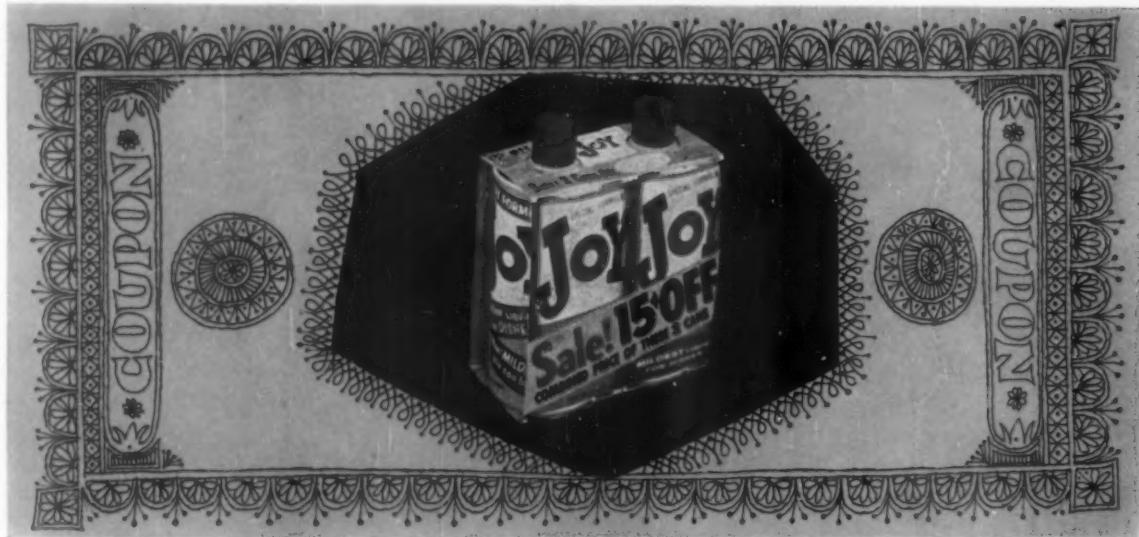
Plants at Huntington Station and Dix Hills, L. I., New York

Rensselaer, N. Y. Plants at Rensselaer, Aliceville, Ala.,
Cavendish, Vt., Peterborough, N. H., Arnprior, Ont., Canada

Interesting opportunities for qualified electronic
and hydraulic engineers exist at Waldorf.



Ideal for Deals!



Cluster-Pak®
multi-unit cartons
...billboard your
special offer at
the point of sale

PAYOUT PRODUCER FOR PROMOTIONS! Revolutionary Cluster-Pak system provides point-of-sale advertising right on the carton for some of America's foremost products. In fact, Cluster-Pak works sales magic... both as a special-offer vehicle and as a convenient every-day way for consumers to buy several cans or jars instead of one.

STRONG! Made with unique self-locking construction (no glue, no staples) from Mead quality kraft, economical Cluster-Pak cartons are the world's strongest.

COMPLETELY AUTOMATIC SYSTEM! Compact Cluster-Pak machines fit right into your production line, are available in a size tailored to your need. One operator packages up to 900 units a minute, easily changes machine for different size or number of cans or jars. For full details, write Mead • Atlanta Paper Company, Atlanta 2, Georgia.

MEAD • ATLANTA PAPER COMPANY
A SUBSIDIARY OF THE MEAD CORPORATION



Where Packaging is Advertising

Option Holders Stay Cheerful

● Despite stock market breaks, the option remains popular bait for recruiting and holding on to top officials.

● Few of the "chosen" are worried; fewer still are complaining about their paper losses.

● Barring a long-term drop in the market, stock option programs are due for more expansion.

The recent sharp drop in the stock market, coming on top of the slide over the past four months, has bruised a lot of people. And high on the list of those with good reason to feel hurt are the select band of executives who, over the past half dozen years, have been granted options as inducements or incentives.

Some have seen paper profits on their options—in one case over \$1-million—wiped out. Others who waited for new market highs before exercising options have found they waited too long. Some have taken cash losses.

Yet paradoxically, stock options as a method of recruiting and holding top officials are as popular as ever, despite the current market uncertainty. Few executives who hold them are worried. Fewer still are complaining. From all indications, the plans will be around for a long while yet.

● **Incentive**—Stock option plans have been in vogue for some time. They work this way: XYZ Co. today gives selected officers the right to buy a certain number of shares of the company's treasury or unissued stock at a price somewhat below the market price on a given day. (The legal minimum today is 85% of market, but the average plan calls for 95%.) The officer may buy the stock at that same price anytime during the next five to 10 years. If, meanwhile, the market price has gone up considerably, he makes a nice profit without any actual cash risk.

The plan, theoretically, gives the executive an incentive to work harder to improve the company, thus increasing the value of the stock, and in turn rewarding him for his efforts. Also, it gives him a better chance to build an estate than he could out of tax-laden salary, thus encourages him to come with, or stay with, a company.

● **Booster**—The real impetus to the plans came with the Revenue Act of 1950. Previously, if stock were sold to an employee below market price, the differential was subject to full personal income tax rates. Under current law, if the stock is not resold less than two years after an option is granted and less than six months after it is actually

bought, there is no income tax on the differential. The spread between the original purchase price and the sale price is treated as a capital gain.

For the man in, say, the \$75,000 salary bracket, an additional \$25,000 in salary lets him take home only an additional \$6,200. A capital gain of the same amount via a stock option lets him keep \$18,750. The roaring bull market from 1950 on made the picture even more appealing. Stock prices frequently rose higher and faster than conservative price-earnings ratios would normally indicate. Some executives literally became millionaires on the option route. Options frequently became the prime carrot in recruiting executives, and were often regarded as a method of paying salary without tax pain. By the spring of 1957, over half the companies listed on the New York Stock Exchange—and probably as many on other exchanges and unlisted—had installed the program.

Over the past two years, stock prices have been on a roller coaster. Here's a sampling of how some stocks were selling at midweek, compared with their bounce from 1955's low to the high in 1956-57:

A leader in the metals industry went from \$42.87 to \$133.50, back to \$65; a papermaker shot from \$35 to \$63, and back to \$35; in the communications industry, one company rose from \$36.75 to \$50.37, then slid to \$29.

● **Consensus**—Where does that leave the option as an incentive to management?

Last week **BUSINESS WEEK** checked dozens of companies—particularly those whose stock prices have slid most sharply from 1956-57 highs—and interviewed executives involved in option programs.

The consensus is that exercise of options has slowed considerably, will stay slow for a while. But, barring a really cataclysmic and long-term drop in the market—which nobody interviewed expects—options programs will not only stay, but expand. Those holding options themselves almost invariably expect to come out ahead.

The optimism must be taken with a

grain of salt—perhaps a large one. Any company statement today is careful to say nothing that might worry stockholders, suppliers, customers, or employees. A vice-president of a large company notes drily, "Since I have to live here, it might be inadvisable for me to complain where it might be heard."

But there is a solid core behind the general unconcern. Some private dreams may have gone glimmering, but little hard cash has been lost on option programs.

There are exceptions, of course—one company official who bought and paid for 10,000 shares last year at a high option price just before the market price hit its peak, has since had over \$100,000 of his equity wiped out while he waited out the minimum period in which he could resell.

● **Few Scars**—Most of the approximately 10,000 executives who came under option plans in the last seven years have not been hurt. Probably less than a fifth of these have picked up their options, and many of these have realized profits.

Here's how one oil executive, who has exercised options on some 15,000 shares over the past five years, describes his operation:

"I borrowed enough cash to pick up the first 20%, sold it at a profit after a year, paid up, used the profit to buy more. I kept doing that till the market turned sour. But I ended up with about 7,500 shares clear and a 35% profit—and I'm using that cash now to buy the company's stock on the open market because I figure its current price makes it a steal for the long haul."

● **Time Limit**—Many of the earlier plans put five-year limits on the time in which an option could be picked up. It's in this group that some of the best bull market profits have been made, partly as a coincidence of timing. Even those who did not sell out before the market broke are still ahead of the game. Sharp drops from recent highs obscure the fact that frequently the original option price was considerably lower than even current market prices. Profits are still to be had, even though big paper profits are shrinking.

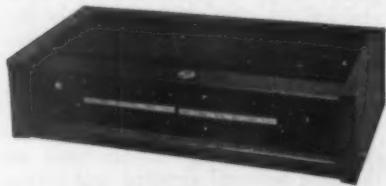
Most of the more recent plans, however, put a seven-to-10-year limit on the time between granting and taking up an option, with the majority at the 10-year point. By far the largest group in this category has not yet exercised its options, still has anywhere from four to nine years in which to move. Since none of these men have put up any cash, they have taken no loss. The most general reaction here: "The economy is still generally sound. Maybe there'll be a dip for a year or two. But

how many 'MINUTES' make a meeting?



RCA MULTI-COM ROUNDS 'EM UP

Do you really have time to sit and wait and hope they've all gotten word? A few quick calls via RCA Multi-Com and you have the situation well in hand. With a good-looking, compact RCA Multi-Com on your desk, a flick of a switch takes you to the offices of your key people. It's far easier to get the information you need when you need it . . . and to get more work done sooner. Switchboards are free for essential outside calls. With efficient Multi-Com on the job, there's less "desk absenteeism," more effective utilization of available personnel. An RCA Multi-Com system can easily be planned around your exact intercom needs. Your RCA Engineered Sound Distributor is the man to do it. He's in your Classified Directory under "Sound Systems" or "Intercommunications Equipment." Or write direct for details. Dept. Z-26.



FOR INTERCOM... BUY MULTI-COM



Tmks®

**RADIO CORPORATION
of AMERICA**

SOUND PRODUCTS • CAMDEN, N.J.

before my deadline runs out, the price will be up again."

Plans that went into effect during the past two years have had no takers yet, for obvious reasons. The stock cannot be resold for two full years after the option is granted, and so only the most naive executive would exercise his rights in less than 18 months.

• **Pick-Ups**—Exercise of options had been increasing steadily in recent years, holding up even during much of the past eight months. According to Securities & Exchange Commission reports on "insider" stock dealings, during the month from April 10 to May 10, 1955, when the boom was reaching its peak acceleration, 39 officers and directors in 21 companies picked up options. In the month ending June 10, 1956, it was 63 individuals in 34 firms. That jumped to 123 men in 63 companies in last January, and 128 men in 71 companies for the month ending Sept. 10.

These figures are for officers and directors only, and do not include sizable numbers of "other key personnel" included in many plans, but it's a safe assumption that proportions hold true for the total group.

Figures for the latest period, since the sharp price drops set in, are not yet available. Companies indicate that the current rate of take-ups had dwindled considerably.

Executives themselves have a variety of reasons, although doubt about long-term prospects is negligible. But there are plenty of short-term reasons.

In some cases, the most recent slide drove market prices under option prices. Many executives with cash on hand and faith in their companies are buying their stock at the better prices in the open market.

In the far larger number of cases, where the market price, though off from recent peaks, is still comfortably above option levels, waiting periods are a deterrent.

On top of the Treasury's requirement of a six-month wait, a considerable number of companies demand that option stock will not be resold for a minimum of one year, sometimes two, except in case of emergency.

• **"Better Wait"**—Right now, few executives are convinced that the bottom has been reached, either in stock prices, or their own companies' sales and profits. They'll wait, they indicate, until a new upward movement is in sight, so their chances of coming out ahead are better.

A fair number suggest that for the near future, anyway, they would rather have cash on hand.

• **Banks Tighten Up**—Tight money and bank caution are also affecting current take-ups.

The most usual way of financing op-

tion purchases has been through bank borrowing—loans of 30% of the market value of the stock, with the securities held as a collateral. (If, as in many cases, the market price is twice the option price, in effect the bank could thus put up 60% of the actual cost of the option.) This is often complemented with the balance in the form of a "character loan" (frequently tacitly guaranteed by the executive's company) or up to 70% of the value of other securities or property the executive already owns outright.

Even in companies where executives are encouraged to hold on to as much stock as possible, or where the individual wants to hold it for estate purposes, it has often been understood that the executive would sell off as much as necessary to repay the loans, to have the rest clear.

Lately, banks have been wary of margin loans, and are upping collateral requirements on other loans, and hesitating on "character" loans. Where market value is not well over option figures, and market price on other stock in his portfolio has also slipped, it may be difficult for the executive to borrow more than 50% of the actual cost of his option.

More than one option holder confesses that right now he doesn't have spare cash to tie up for what might be a long wait until real gains show up again on this option stock.

• **Wishful Thinking**—There's some talk that since options now are worth less, companies might adjust option prices downward. That is possible for those companies whose practice is to offer recurrent options on an annual or biennial basis and where original stockholder approval of the plan covered only an amount of treasury stock to be set aside for options without specifying amounts, prices, or time to individuals by name. Where only part of this total has been "granted," a company might still authorize "additional" options, reflecting the current market, even though original options had not been exercised, leave the election of which options to pick up to the individual.

For companies without that freedom, "better" option prices are unlikely. The president of a major capital goods company notes: "Any new or changed stock option plans still have to be presented to stockholders. These are people who have laid hard cash on the line, seen their equity fade, sometimes a lot. Can you imagine the noise if we went to them and said, 'Our option-list executives won't make as much risk-free profit as they'd like, so we're sorry you've taken a loss, but we want to fix our inside boys better.'"

Yet a number of companies are still holding out options as an inducement in recruiting new talent. At least one

the men of SHARONSTEEL... they make quality a tradition



PHOTOGRAPH BY KARSH OF OTTAWA

To make better steel Bronco Generalovich works with bears, sows, pigs and old horses!

- Quality control in steelmaking begins with the extraction of iron from native ore. This calls for huge blast furnaces and expert operators like Sharon's Bronco Generalovich. Traditionally these men describe their work in words more apropos to the farm. A "Bear" or "Old Horse" is that mass of metal remaining in the blast furnace. A "Sow" is the iron cast in the main sand channel that leads to the "Pigs," which are small iron castings.

When the finest in steels are required Bronco and his colleagues in Sharon's Blast Furnace Department can really talk the customers' language.

SHARONSTEEL

For 56 Years
a Quality Name
in Steel

SHARON STEEL CORPORATION, SHARON, PA.



PHOTO COURTESY OF ALUMINUM COMPANY OF AMERICA

World's Largest Die

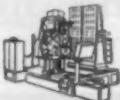
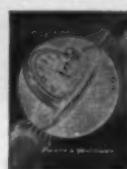
MILLED EASILY, ACCURATELY ON A P&W

KELLER MACHINE . . . Consisting of two halves, each weighing 30 tons, this is the world's largest closed die block. Designed to forge aluminum backbones of fuselage and wing structures for the new multi-jet Martin SeaMaster, this giant die was produced by "Kellering" at the U. S. Air Force Heavy Press Plant operated by Aluminum Company of America.

You may not require a 30-ton worksize capacity, but there is a P&W Keller Machine just right for every job requirement . . . ideally suited to handle your dies, molds, prototype work and production milling faster, easier, more profitably.

Write for complete information.

Pratt & Whitney Company, Incorporated,
41 Charter Oak Blvd., West Hartford, Conn.



JIG BORERS • ROTARY TABLES • KELLER MACHINES • TOOLROOM LATHES • VERTICAL SHAPERS • CUTTER AND RADIUS GRINDERS



PRATT & WHITNEY
FIRST CHOICE FOR ACCURACY
MACHINE TOOLS • GAGES • CUTTING TOOLS

company president sees no problem in offering newcomers options at a lower price than old-timers already have. "Our senior people understand the whole thing is a gamble. They won't squawk." And most figure that even if the market slides further, options will still become a permanent institution.

• **Few Quick Kills**—In spite of the publicity, comparatively few executives figure options as a way to a quick killing. Even those who have sold part to keep part consider it the only possible way of building an estate rather than a way of getting more cash for immediate use. These men, as a result, are not overly concerned about the current dip.

This is not entirely hindsight talking in the face of a drooping market. A check of SEC reports—even on the officer and director level—shows the vast majority of actual take-ups have been in blocks of 100 to 300 shares, and these are not amounts at which quick killings are made.

Moreover, in spite of fluctuations, many executives are convinced that as big companies get bigger, and small companies fewer, some way must remain for an executive to get closer identification with his company. "Twenty years ago," says one president, "the kind of man we want ran his own company. Today, as one small cog in a giant, he's got to have some stake in what he's doing besides salary. Our own experience is that, regardless of capital gains that might or might not have been made, the men with options show considerably more awareness of and concern with future problems of the company than before they got the option."

• **No Substitute**—Some individuals do quarrel with the concept of the stock option, "because you've got to sink practically everything you have into it, and it makes it impossible to build a balanced portfolio." Two companies interviewed that were planning stock option setups have decided to stick with cash bonuses. All the others insisted that they would continue, and probably enlarge, the plans.

The overriding reason is that no one has a substitute incentive method. Says a chemical company president typically: "Unless everything falls apart, there's no end in sight in the race for more and better talent. Pirating of executives isn't slowing down. As long as individual tax brackets stay so high, just a higher salary tag isn't enough. Detailed gimmicks, like company-provided cars and unlimited expense accounts have gone just about as far as they can already, and the Treasury is already cracking down on many of them. The stock option plan is still the only thing that offers both a comparatively risk-free gamble and encourages a man to work his damnedest." **END**



GE looks at coal as low-cost fuel

For low-cost steam generation and supply availability, GE burns coal in Louisville

To generate all steam necessary for process work and heating requirements at General Electric's Major Appliance Division in Louisville, Ky., GE's power plant burns coal the modern way. Coal was chosen after a fuel cost survey disclosed that, in the Louisville area, coal would give GE the lowest-cost steam generation of all fuels. In addition, mechanization of GE's power plant has facilitated coal handling and ash removal while overcoming the possibility of air pollution.

Consult an engineering firm

If you are remodeling or building new heating or power facilities, it will pay you to consult a qualified engineering firm. Such concerns—familiar with the latest in fuel costs and equipment—can effect great savings for you in efficiency and fuel economy over the years.

Facts you should know about coal
Not only is bituminous coal the lowest-cost fuel in most industrial

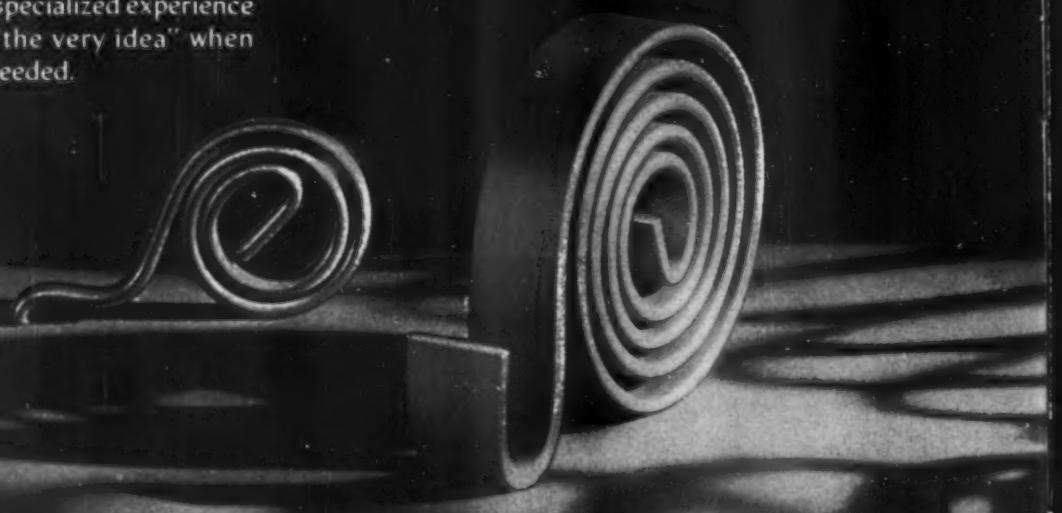
areas, but up-to-date coal burning equipment can give you 10% to 40% more steam per dollar. Today's automatic equipment can pare labor costs and eliminate smoke problems. And vast coal reserves plus mechanized production methods mean a constantly plentiful supply of coal at a stable price.

For additional case histories on burning coal the modern way or for technical advisory service, write to the address below.



IDEAS . . . into springs

During the thinking stage of new developments or improvements, count on our specialized experience to produce "the very idea" when springs are needed.



ASSOCIATED SPRING CORPORATION

General Offices: Bristol, Connecticut

World's Largest Manufacturers of Precision Mechanical Springs

CONVENIENT MANUFACTURING DIVISIONS Coast to Coast

WALLACE BARNES CO. THE WILLIAM D. GIBSON CO. RAYMOND MANUFACTURING CO. BARNES-GIBSON-RAYMOND DIV.
Bristol, Connecticut and 1800 Clybourn Ave., Chicago 14, Ill. Corry, Pennsylvania 40300 Plymouth Rd., Plymouth, Mich.
Syracuse 9 (Solvay), N.Y. and Ann Arbor, Michigan

MILWAUKEE DIVISION OHIO DIVISION CLEVELAND SALES OFFICE
341 E. Erie St., Milwaukee, Wis. 1825 E. 1st St., Dayton, Ohio 22700 Shore Center Ave., Cleveland, Ohio
SEABOARD PACIFIC DIVISION DUNBAR BROTHERS CO. F. N. MANROSS AND SONS CO. THE WALLACE BARNES CO., LTD.
15001 So. Broadway, Gardena, Cal. Bristol, Connecticut Bristol, Connecticut Hamilton, Ontario, Canada

WALLACE BARNES STEEL DIVISION - Producer of High-Carbon Strip Steel

Troubles Besiege the Teamsters

The truckers' union stands almost alone against formidable foes: organized labor, the U.S. Senate, and two federal courts.

During the next few months, the International Brotherhood of Teamsters will face concentrated pressures from every side. Very likely, no labor organization in many years has been so beset by problems—and so isolated from allies in tackling them.

The list of those challenging the 1.5-million-member truckers union is a powerful one, including the federal government and the massive bulk of organized labor.

For each, the objective is the same: a purge of suspect influences in the IBT, starting with James R. Hoffa, president-elect, and reaching deep into the leadership of the scandal-scarred union.

- **Standing Alone**—Ordinarily, labor rallies to any union under attack. But few outside IBT have given the truckers their support. The charges against the Teamsters leadership are too grave, and—perhaps more importantly—the perils of advocacy are too great at a time when Congress is in the midst of an exhaustive probe of labor. So the Teamsters and its leaders stand almost alone against the Senate Select Committee, legal actions in two federal courts, and the Executive Council of AFL-CIO, which last week ordered that the IBT "shall stand immediately suspended" and shall continue so until the union "complies with the . . . directive to eliminate corrupt influences from positions of leadership."

The action, by a 25 to 4 vote, was not taken lightly, the council made clear last week. It was debated seriously. Compromises were suggested and rejected. In the end, the order announced by the federation's president, George Meany, showed no shade of compromise. Instead, it pointedly isolated the Teamsters by suspension while other orders eased the pressures on two other unions under attack—the United Textile Workers and the Bakery & Confectionery Workers. Action on their possible suspension was delayed until a new Nov. 15 deadline.

Strategy dictated this. The federation policymakers moved to separate the truckers union from the others under scrutiny and thus make it more difficult for IBT to pick up allies—or possible satellites if it is expelled from AFL-CIO at its biennial convention this December.

- **Meaning**—The vote to suspend was



AFL-CIO cracked down by suspending the Teamsters and threatening expulsion unless they clean up. The move was a triumph for Pres. George Meany (left), with Walter Reuther.

SENATE rackets committee, under Sen. McClellan (left) and Robert Kennedy, is holding fire pending decision on Teamsters in court, where union faces further woe . . . (turn page).



ABBEY ETNA PIPE and TUBE MILL INSTALLATIONS are **WORLD WIDE**



- Australia
- Brazil
- Canada
- Egypt
- Formosa
- France
- Germany
- India
- Lebanon
- Pakistan
- Spain
- Switzerland
- Turkey
- United States

On metalworking frontiers everywhere, Etna mills are preferred for producing electric-weld pipe and tubing. The reasons are advanced engineering to give highest production speeds combined with versatility to process many metals in various gauges and OD sizes.

write for data on . . .



SWAGING MACHINES
TUBE CUT-OFF MACHINES • ALLIED EQUIPMENT

Abbey ETNA
MACHINE CO.

301 E. INDIANA AVENUE • PERRYSBURG, OHIO



WIRETAPPING charges against Hoffa will be heard by U. S. District Judge Bryan.

particularly significant for two reasons:

• It demonstrated Meany's tight control over the federation and his prestige and influence in the union hierarchy. Meany put his insistence on a Teamsters cleanup flatly on the line. He coldly rejected compromises with the federation's largest union, even though the suggestions came from some of the most influential council members.

• And it reflected labor leaders' concern over possible punitive legislation from the next session of Congress and in the states. It showed that they are convinced that the only way to avoid getting hit by Congress is to take strong action themselves.

Three of the four votes against suspension had been expected:

Pres. Maurice Huteson of the Brotherhood of Carpenters ran into trouble with AFL-CIO earlier this year when he invoked the Fifth Amendment—against federation rules—in a Congressional hearing on an Indiana highway land deal. Although AFL-CIO charges against him have been quietly dropped, Huteson is bitter about the federation's Fifth Amendment rules. Moreover his union and the Teamsters have always got along well together, and an organizing-jurisdiction pact between the two is particularly effective. So, Huteson recently praised Hoffa for the Teamsters convention actions, and he backed the IBT against suspension last week.



ORDER barring Hoffa from taking office was issued by U. S. District Judge Letts.

Herman Winter, president emeritus of the Bakery Workers, voted against suspension for an obvious reason: His union was awaiting action the next day on similar charges.

Secy.-Treas. John F. English of the IBT, of course, voted no.

The big surprise was the fourth dissenter, William C. Doherty, president of the National Assn. of Letter Carriers. He proposed to the council that it delay action on IBT until its February meeting. Privately, he's supposed to have supported the Teamsters in return for their backing him in 1953 for the post of AFL-CIO secretary-treasurer, which went to William Schnitzler.

• **Unpopular Step**—There's no question that the suspension move was unpopular with some other members of the council who voted for it. Harry Bates, of the Bricklayers, for instance, told the group that expulsion of the Teamsters would create troubles for his union, closely allied with the IBT on construction projects. But Bates, who had been expected to resist suspension, voted along with the majority—an indication of Meany's influence.

The AFL-CIO eight-man Executive Committee had a dinner meeting with the Ethical Practices Committee the night before the council met on the Teamsters. At that time, George Harrison of the Railway Clerks brought in a compromise offer from the Teamsters relayed to him by Harold Gibbons. Ac-

New battery portable lets you dictate anywhere

(operates for only 5¢ an hour)



Pick your spot! Middle of the Gobi, high in the clouds, in your car, on the train . . . anywhere. With this *transistorized* battery portable and regular SoundScriber green discs you talk away work while it's fresh in your mind . . . get more done en route for more leisure at home.

Operating cost? A mere five cents an hour—the lowest of any battery machine on the market. That's because it's designed to work efficiently on four economical, easy-to-buy flashlight batteries. Gives big machine performance, yet is so small and light you can tuck it in a brief case and have plenty of room left for papers.

Try the 200-B tomorrow. Just call your local SoundScriber office. Or, for booklet, clip the green disc trademark below, attach to your letterhead and mail with name to: The SoundScriber Corp., Box 1941, Dept. B-11, New Haven, Conn.

FlashLight batteries you can buy anywhere, transistors and printed circuits assure stable, long-life operation of the 200-B. Its compatibility with SoundScriber systems eliminates the need for a special transcriber or for re-recording. Discs can be mailed in standard envelopes at regular letter rates. Recordings, made at 33½ RPM, play on home phonographs, too.

SOUND SCRIBER 200-B

WORLD'S FIRST COMPLETE AND COMPATIBLE DICTATING SYSTEM



Portable Dictation



Office Dictation



Transcription



Telephone Dictation



3 Disc Versatility



We invite your visit to our new plant, newest and most efficient manufacturing facility in the industry.

for your records!

This booklet, yours on request, can help guide your organization to the right paper for each record requirement. After 100 years of experience in making Cotton Fiber Papers, Parsons today produces a grade for each record-keeping use. This booklet may help you now.

Parsons
papers

WRITE ON YOUR BUSINESS LETTERHEAD FOR OUR BOOKLET NO. 13, ON HOW TO CHOOSE THE RIGHT RECORD-KEEPING PAPER. PARSONS PAPER CO., HOLYOKE, MASS. © PPCO 1957

cording to Harrison, Gibbons said the Teamsters would do almost anything to stay in the federation—Hoffa would even take an indefinite leave of absence if the council would put the union on probation rather than suspend it. This was rejected.

When the Teamsters executive board came to AFL-CIO headquarters, they knew of this rejection but apparently weren't convinced that it would stand. At the council meeting, during the Teamsters 14-hour appeal, Hoffa again went through explanations of his activities, including a recounting of his Sun Valley (Fla.), real estate deal. One council listener said: "If we didn't know what actually went on, Hoffa might have convinced us he was all right." Hoffa, when he came out of the session, was obviously shaken. He couldn't manage even a forced grin. Afterwards, Meany made it very plain that Hoffa was the principal target of the suspension order.

• **How to Make Good**—The two conditions that the Teamsters must meet to return to AFL-CIO's good graces are:

- Hoffa must be barred from any elective or appointive office in the union, along with others "named by the Executive Council . . . as being responsible for abuses."

- The Teamsters must allow an AFL-CIO committee to correct abuses cited by the Ethical Practices Committee, eliminate any other corrupt influences, and insure compliance with federation laws.

The council order to the Teamsters calls for a prompt cleanup. If there isn't one, it will recommend expulsion to the AFL-CIO convention in December. Meanwhile, although the Teamsters stand suspended, other unions aren't expected to move to cancel existing mutual-aid pacts with the trucking union. The idea is to go slow, to see what might happen. If expulsion comes, the pacts will have to be torn up. But, even then, cooperation might continue at local levels despite the split between the parent unions.

- **Little Change**—No pressure will be brought on Central Labor Councils to oust the Teamsters before the December convention. In fact, there will be no immediate visible change in the Teamsters position within the AFL-CIO, except that it will not pay a per capita tax on its members to the federation and, it won't have a vote at the convention, although it can attend to appeal suspension and expulsion moves.

There is no talk yet of chartering a rival union. The first plan, if expulsion comes, is to establish federal labor unions of Teamsters dissidents. The AFL-CIO envisions up to one-third of

the Teamsters remaining in the federation; the Teamsters claim less than 10% will bolt.

- **Back in Court**—Meanwhile, Teamsters attorneys went to court this week with an appeal against a temporary injunction issued by U.S. District Judge F. Dickinson Letts, barring Hoffa and other newly-elected officers from taking office.

The injunction is based on a petition by 13 rank-and-file Teamsters members who claim that delegates to the recent convention in Miami Beach were illegally chosen.

In another court, Hoffa's perjury trial is tentatively set for Nov. 4 before Judge Frederick von Pelt Bryan in New York. After that comes a trial on wire-tapping charges, also before Judge Bryan.

A Teamsters defeat in any one of the three cases could keep Hoffa out of office. This is the AFL-CIO's main hope and is the big reason why it doesn't want to disturb lower-level AFL-CIO relations with the Teamsters until expulsion is a fact. Then the war will start, but not until then.

- **Other Unions**—Orders to the United Textile Workers and Bakery Workers varied somewhat. Both were given until Nov. 15 to show some cleanup intentions. Specifically:

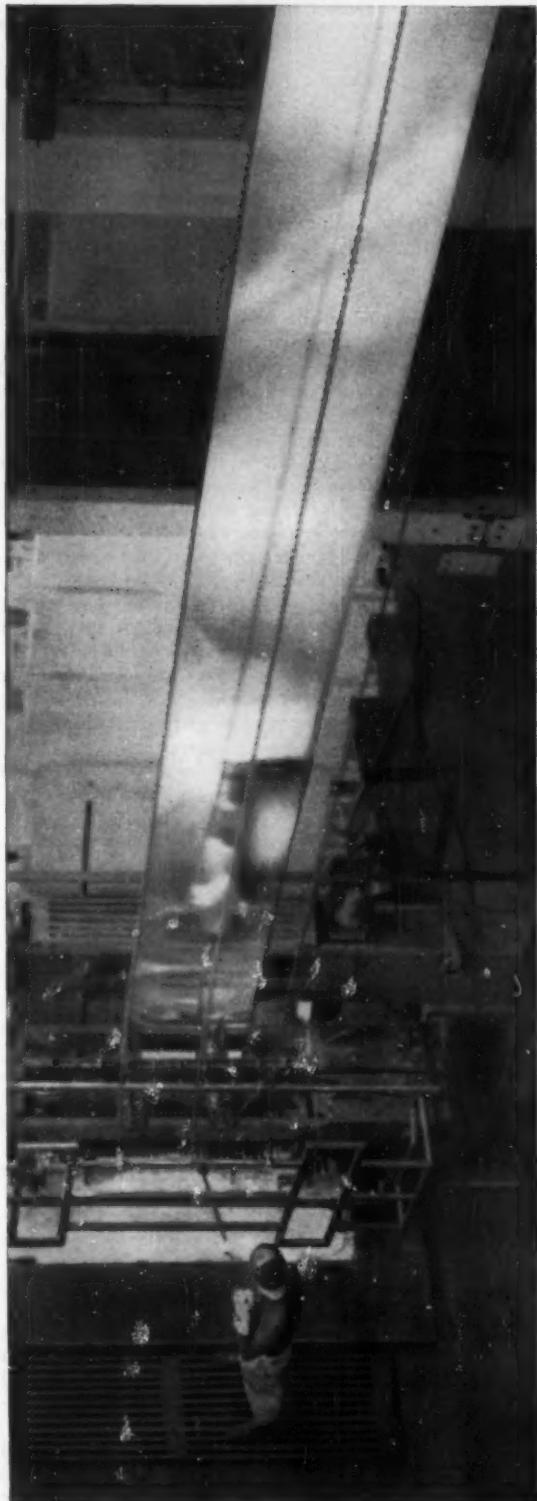
- The Bakery Workers was ordered, in that time, to rehire suspended Secy.-Treas. Curtis Sims, who led the campaign against Pres. James Cross. It was also ordered to hold a special election in 90 days to elect new officers and Cross is barred as a candidate. The vote was 24 in favor; Winter voted no, and Schnitzler, ex-president of the Bakery Workers, abstained.

- The textile union order was to dispose of Pres. Anthony Valente and cancel a severance pay plan for Lloyd Klenert, who resigned recently as secretary-treasurer. The union had agreed to pay him \$100 a week for 20 years, or a total of \$104,000. Also, the union must take on an AFL-CIO monitor and hold a special convention to elect new officers. The vote was 22 in favor; Winter and Emil Rieve of the ex-CIO Textile Workers Union of America abstained.

Some AFL-CIO leaders believe the Bakery Workers, if they too get expelled, will join the Teamsters in an alliance of independents. There's still talk about the Teamsters and John L. Lewis. Though Lewis has publicly displayed no interest at the Teamsters trial before Judge Letts last week, two Lewis aides were sitting in the back of the courtroom, intently interested in the proceedings. They came and went almost unnoticed.

So far, of the first three unions to come up against AFL-CIO action:

- The Allied Industrial Workers



ROLLING OUT THE MILES...

of Armco Special Coated Steels for Better Products, Lower Costs

Special coated steels developed by Armco can improve the performance of your products . . . increase sales appeal.

Armco ALUMINIZED STEEL® Type 2, for example, provides outstanding resistance to atmospheric corrosion. This new two-in-one metal — sheet steel hot-dip coated with aluminum — is ideal for all outdoor products.

Armco ALUMINIZED STEEL Type 1 is another special hot-dip aluminum-coated sheet steel that offers unusual resistance to a combination of heat and corrosion. It is used extensively for automobile and truck mufflers, furnaces and similar applications.

Still another special coated steel, Armco ZINCGRIP®, can be severely drawn or formed without flaking the tightly adherent zinc coating. Used by manufacturers for 21 years, it gives products unbroken protection against corrosion — often at less cost than painted or plated cold-rolled steel.

Armco ZINCGRIP PAINTGRIP® offers all the advantages of ZINCGRIP plus a special mill-Bonderized surface that takes paint without pre-treatment. The surface grips and preserves paint, makes your products look better and last longer.

Using the correct special Armco Coated Steel for your product adds up to more sales-appeal and lower costs. It will pay you to get the full story. Call the nearest Armco sales office or write Armco Steel Corporation, Middletown, Ohio.

One of Armco's continuous hot-dip coating units. In one day many miles of strip steel move through furnaces like these to receive a tightly bonded coating of zinc or aluminum. Patented processes and rigid quality control make these coated steels the standards of the industry.

ARMCO STEEL CORPORATION

MIDDLETOWN, OHIO



SHEFFIELD DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION

"Finnegan! It's costing us too blasted much to ship to New Orleans."



"We could cut all our shipping costs, Sir. UBL's new book tells us how, Sir."

Finnegan is right! Union Barge Line's new book has helped many a shipper cut costs, and also explains the many other advantages offered by this inland waterway transportation service.

Want more facts?
Write for Bulletin
1801 G, or call EX-
press 1-2600, Pitts-
burgh, for immedi-
ate information.



UBL
UNION BARGE LINE
PITTSBURGH 22, PA.

The modern distribution service
supplying 234 markets in 18 states

has now been cleared. The council lifted probation last Thursday after a report that the union had complied with cleanup orders.

• The Laundry Workers has been suspended and the council will recommend expulsion to the convention. The Laundry Workers will appeal this.

• The Distillery Workers will be ordered to hold a special convention to elect new officers. The union is currently on probation.

• In the Senate—The Senate racket investigating committee chaired by Sen. John McClellan (D-Ark.), is purposely steering clear of testimony by or about Hoffa during his legal trials to avoid upsetting the boat. The committee has displayed more than a minor interest in his future, however, by furnishing the 13 Teamsters rank-and-file plaintiffs with committee records subpoenaed from Teamsters locals to use in support of the court injunction against Hoffa's assuming the presidency.

In the interim—and a return to Hoffa is contemplated by the McClellan committee—the investigators are delving into management corruption charges and activities of labor relations consultant Nathan Shefferman. With more than 400 businessmen clients, mostly in the retail trades, Shefferman's ac-

tivities have been challenged by Sen. McClellan as "payoff and shakedowns" to keep unions out of his clients' shops. Despite the concentration on employers, this hearing is expected to bring the Teamsters in again because of Shefferman's close associations with Dave Beck.

Also in the works are investigations of Shefferman's favors to union leaders for whom he bought merchandise at wholesale prices. This will include prominent labor leaders who have not come up before the committee in previous hearings. In addition, the committee is showing a disposition to step more deeply into union affairs. In December, the McClellan group plans to take on the bitter Kohler Co. strike, with public sessions to hear testimony from the United Auto Workers and officials of the Kohler, Wis., plumbing ware concern.

The decision to go into Kohler indicates a shift by the committee into new phases of its investigation. The Kohler strike does not involve corruption, but charges by both sides in the bitter battle range from violence to unfair labor practices. This indicates the committee is becoming less wary of trampling on toes of either management or labor—and that McClellan expects to be in business for a long time to come.

Unions Claim One Out of Every Four

Labor Dept.'s latest nose-count shows that membership is on the rise, despite slowdown in organizing drives.

Membership in unions has risen to a peak 18.5-million, according to 1957 figures compiled by the U.S. Dept. of Labor. This is an increase of 500,000 since the last government survey of union strength at the end of 1954.

The figures compiled for the department's Directory of National and International Labor Unions in the United States, to be published later this year, indicates that one of every four persons in the nation's labor force now belongs to a union. If those holding farm jobs are excluded, one of every three workers holds a card in a labor organization.

The federal figures are based on membership reports by the unions to the Labor Dept.

• **The Leader**—According to the latest count, about 16.9-million workers are in unions affiliated with AFL-CIO. In the last pre-merger year, 1954-55, AFL reported 10.9-million members to the Dept. of Labor, CIO 5.2-million, for a total 16.1-million.

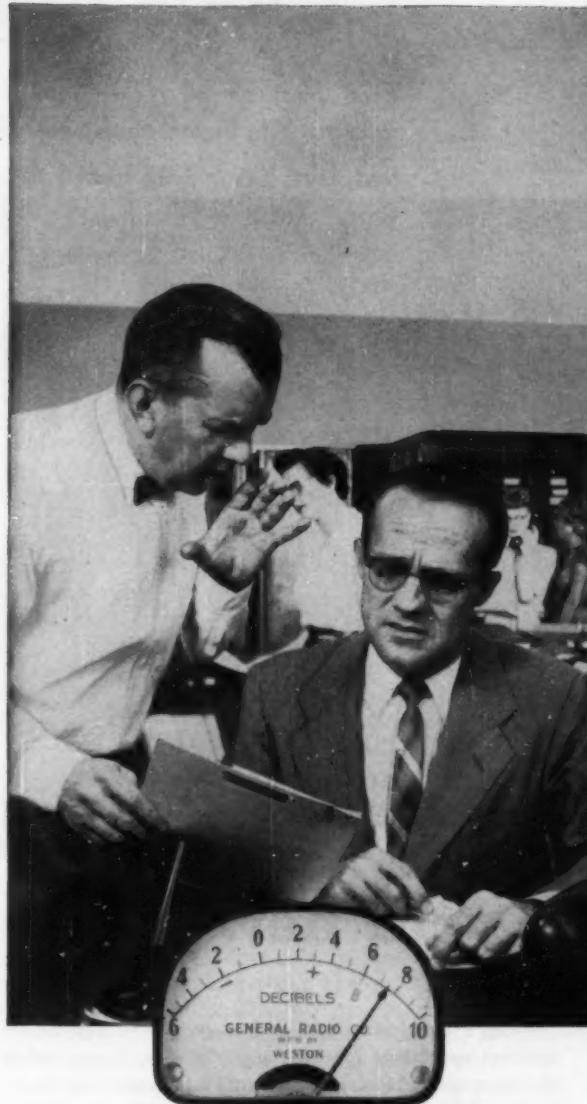
This year's survey places the total membership of independent unions at 1.6-million. Of about 195 national or international unions, 57 are not affili-

ated with AFL-CIO. Independent union membership at the end of 1954 was a slightly higher 1.8-million.

Other figures in the preliminary report show that:

- Almost a fifth of today's union members—or 3.4-million—are women. Two years ago, according to the Labor Dept., the total was just under 3-million.
- About 2.5-million of the union members are white-collar workers.
- More than 900,000 are government employees.
- And, although they are members of this country's unions, more than 1-million of the 18.5-million unionized workers are employed outside the U.S.—most of them in Canada.

The reported increase in total union membership from 18-million to 18.5-million is interesting in view of the general slowdown in organizing. Two years ago, the Labor Dept. noted that union growth had apparently halted; labor membership was on a plateau, unchanged from 1953 and up just a million from an estimated 17-million in 1951. **END**



SOUND-LEVEL METER 4:26 P.M. THURSDAY



SOUND-LEVEL METER 9:47 A.M. FRIDAY

How to enjoy a quiet office tomorrow morning

SOUND CONDITION your office with a beautiful new Armstrong Ceiling
It can be installed overnight during non-working hours

LOOK at the meters in the pictures above. See how the needle at the right has dropped. It shows how effectively an Armstrong Acoustical Ceiling reduces disturbing office noise. Result, personnel efficiency goes up. Best of all, Armstrong Ceilings can be installed practically overnight.

Armstrong Ceilings absorb up to 75 per cent of the noise that strikes them. In addition to sound conditioning, the ceilings offer many other advantages.

Armstrong Ceilings are pre-finished

so they can be installed without painting. Compliance with building codes is never a problem, and many of the materials will add new fire safety to your offices. Armstrong Ceilings are available in a wide range of designs and prices to suit your individual needs.

Call your Armstrong Acoustical Contractor today. He's a specialist in making fast installations with little or no interference with office routine. He'll give you a detailed job analysis and estimate without obligation.

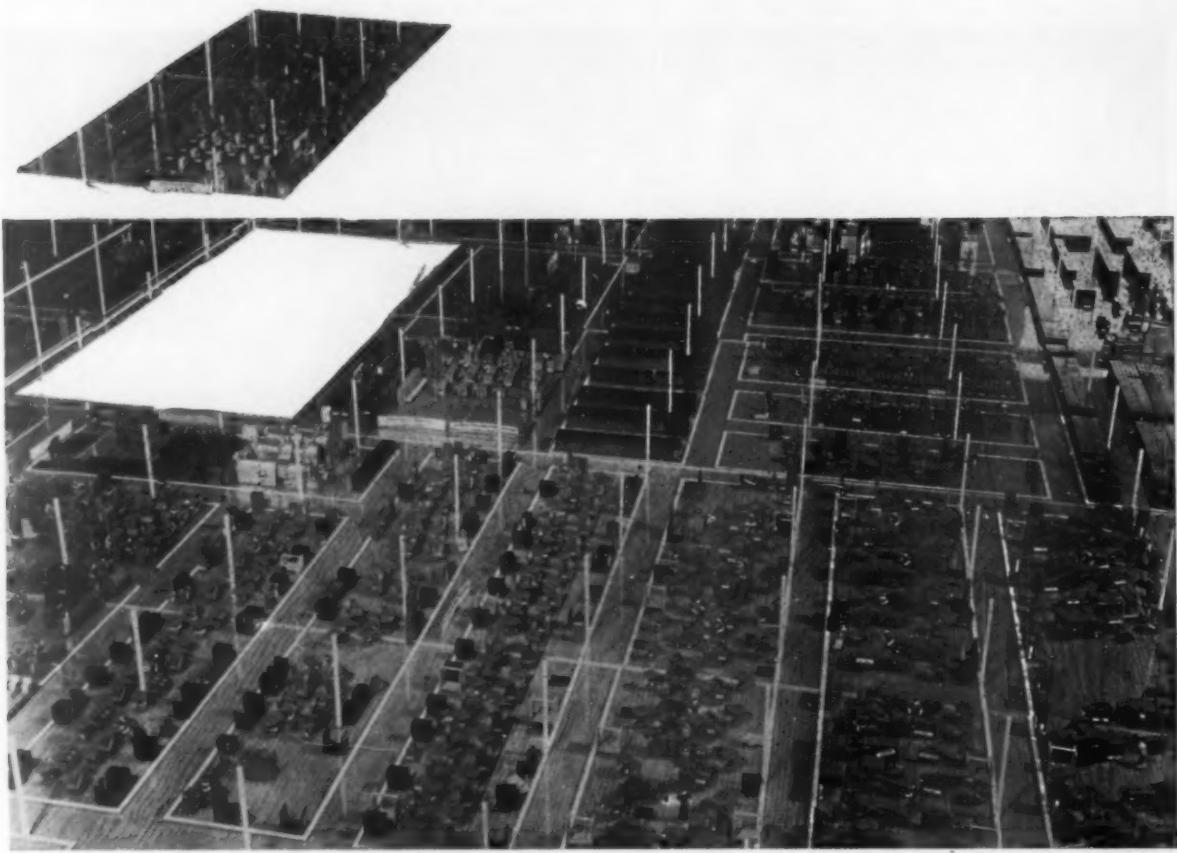
You'll find him listed in the Yellow Pages of the phone directory. Or, for his name and address, write Armstrong Cork Company, 4211 Indian Road, Lancaster, Pennsylvania.

Armstrong

ACOUSTICAL CEILINGS

Cushiontone® • Travertone® • Crestone®
Minatone® • Arrestone® • Corkoustic®
Custom Mineboard®

*TRADE-MARK



"Visual" Plant Layouts Inc.

What not to put into your new plant

Tool and die facilities are costly...

Buy special tooling outside to save space and manpower

Your new or expanded plant that has "everything" may have too much! Chances are you don't really need a tool-and-die-making facility. It's expensive to build, expensive to equip and staff, and expensive to maintain. Your alternative is the contract tool and die industry, made up of specialists in designing and building every type of special tooling.

By eliminating facilities for making special tooling, you can use the floor space and capital you save for your real job of production. And you can divert hard-to-get skilled men to other vital tasks; minimize recruiting.

Today's trend among manufacturers is to depend on contract specialists for dies, jigs, fixtures, gages, molds and other special tools and machinery. Because they "live" tools and dies every day, contract plants have the diversity of creative thinking required to build the cost-cutting special tools essential to competitive mass-production.

Whether you're planning a new plant or seeking more tooling capacity for your present one, you will find it pays to go outside for special tooling. Put your tooling problems into the experienced hands of NTDMA members and clear your plant for profitable production.

National Tool & Die Manufacturers Association

906 Public Square Building, Cleveland 13, Ohio



IT PAYS TO GO OUTSIDE FOR SPECIAL TOOLING

WRITE TODAY for Directory of Member Plants and Services of NTDMA...an organization of over 1,000 companies that design and manufacture special tools, dies, jigs, fixtures, gages, molds and special machinery; located in major industrial centers throughout the U.S. and Canada.

In Labor

Steelworkers Urged to Subsidize Union Men Sitting in Legislatures

If David J. McDonald has his way, the United Steelworkers may subsidize union members who seek—and win—seats in state legislatures.

The president of the million-member USW recently told a district conference that the lack of labor representation in legislatures is "a big reason why unions and collective bargaining gains are being threatened today by anti-labor measures in the states."

The trouble is, he added, union members can't afford to serve in most legislatures. The pay isn't enough to offset lost wages and added costs.

So, McDonald said he will "propose to the [USW] international executive board that we subsidize union members to run for state legislatures," by paying their lost wages and extra expenses.

Other unions are equally concerned with the fact that few laborites ever serve in state legislatures. One Tennessee local subsidized a member who did several years ago. If the USW sets a precedent, the practice may spread.

Workers Have More Money to Spend But They Can't Buy Any More

The net spendable income of American workers rose 32¢ a week from August to September, but the increase made no appreciable difference in buying power. The climb in the cost of living to a new record high (BW—Oct. 26 '57, p161) almost completely offset the gain in pay.

According to the Bureau of Labor Statistics, the earnings after taxes of the worker with three dependents rose to \$75.63 a week in September, while earnings of the single worker rose to \$68.22. Both figures were 90¢ a week higher than in September, 1956.

BLS noted that the purchasing power of a week's pay rose fractionally from August to September, but remained about 2½% below what it was a year before.

Court O.K.'s Payment of Benefits For Stroke Due to Extra Exertion

The Pennsylvania Workmen's Compensation Board has ruled that benefits can be paid for death or disability caused by a heat stroke in connection with greater than usual exertion, risk, or exposure.

The decision may set precedent for a new area of compensation cases.

John J. Gallagher, a truck driver for a Philadelphia building supplies firm, handled deliveries alone on a hot day, after his helper failed to show up for work and a

replacement could not be obtained. He suffered a heat stroke and died.

An initial ruling denied his widow workmen's compensation death benefits. The case was appealed to the courts. On reconsideration, the Pennsylvania board decided that Gallagher, working alone, undoubtedly had been subjected to "greater than usual" strain, and that the stroke—and death—probably resulted from that fact. The board O.K.'d the death benefits. At the same time, it noted as policy that there must be a qualifying factor of extra exertion, risk, or exposure to make a stroke compensable.

U.S. Moves to Set Up Blacklist Of Contractors Violating Civil Rights

Negro job opportunities have increased in the past several years, but, particularly in the South, Negroes are still up against bias bars at hiring offices and on the job. For instance, a recent labor survey reported "almost no integrated factories in the South."

The President's Committee on Government Contracts, now four years old, is the principal federal agency warring against race discrimination in employment. For four years it has relied on persuasion in its drive to win Negroes equal job rights on government contract work. At most, it has had only fair success. Southern employers frankly admit that they circumvent the anti-bias rule.

Last week, the committee headed by Vice-Pres. Richard M. Nixon prepared to take a tougher stand. It ordered federal contracting agencies to report all companies found to be practicing discrimination among those employed on government contract work.

This could be a first step toward an official listing of government contractors who are violating the civil rights rules—in effect, a blacklisting that could lead to cancellation of existing contracts and the refusal of new ones.

Latest C-of-L Rise Helps Boost Railroaders Pay by 12¢ a Hour

Railroad workers' pay rose a total 12¢ an hour this week as a 5¢ cost-of-living allowance based on the latest rise in the government's Consumer Price Index and a 7¢ raise negotiated in 1956 for this year went into effect.

The increases for nearly a million railroad employees across the country brought their wage gains in 1957 to 15¢ an hour. They had received a 3¢ c-of-l adjustment in April.

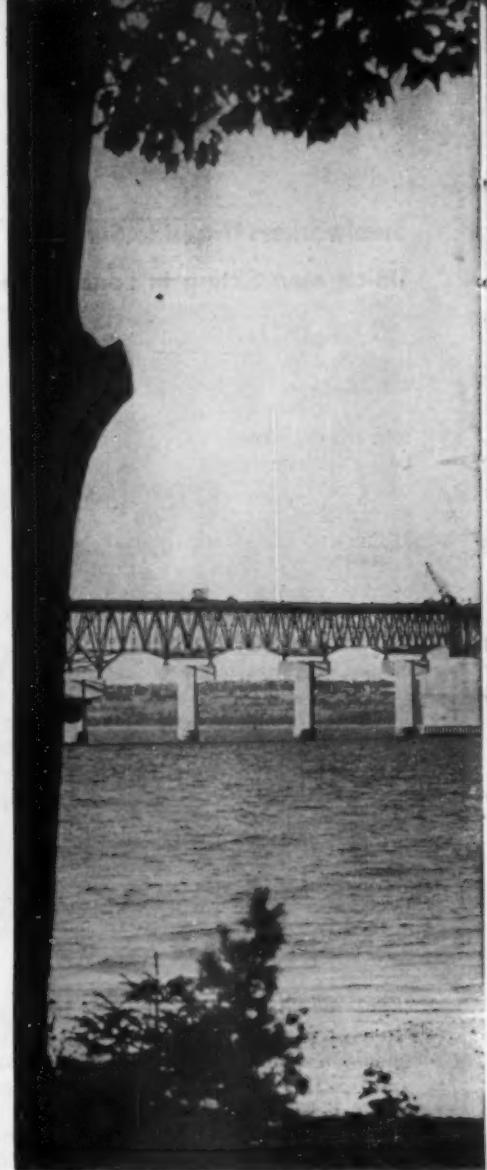
Meanwhile, one of the rail unions, the Brotherhood of Locomotive Firemen & Enginemen, announced that it will apply a 7¢ hourly pay hike due automatically on Nov. 1 next year to a national health-medical welfare plan. The union's contract covering 140 major carriers gave the BLFE the option of taking a wage increase or a 7¢ employer contribution for a welfare program either this year or next.

Plans for the welfare program to cover union members and their families are being roughed out now, will be put before the roads next year.

REGIONS



MACKINAC BRIDGE (above and right), linking Michigan's Upper Peninsula with its home state, is looked upon as the gateway to a new era of prosperity for the region.



SPANNING the Straits of Mackinac from Mackinaw City (south) to St. Ignace (north), the bridge is only a few hours drive from the state's metropolitan centers.

Michigan

Mackinac Bridge brings Upper Peninsula closer to industrial centers, and opens region to new development.

On Friday, Nov. 1, Michigan's Gov. G. Mennen Williams paid the first toll across the Mackinac Bridge. The ceremonial rites officially restored the sparsely populated, mineral-rich Upper Peninsula to the rest of the state and—it's hoped—inaugurated a new period of prosperity for the region.

Requiring nearly \$100-million in financing, the world's longest suspension bridge already has weathered more serious assaults from engineers, financial



Throws a New Line to Old Outpost

analysts, and politicians than it will ever face from Saskatchewan winds and Lake Michigan ice floes.

There are really two stories to the Mackinac (pronounced Mackinaw) Bridge, which replaces a 34-year-old ferry system connecting the two Michigan peninsulas divided by the Straits of Mackinac:

- It was built despite many obstacles. Half a dozen serious efforts since 1920 failed before the present authority was formed in 1950; and engineering and financing setbacks delayed actual construction another four years.

- The debate over what the bridge will do for Upper Michigan—the extent to which it will open up a new tourist mecca, encourage industry, and pro-

vide a new transcontinental route—is strongest among those who will benefit the most.

I. A State Divided

Up to this week, the Upper Peninsula has always been considered more an extension of Wisconsin than a part of Michigan. "When we go to the big city, it's Green Bay, Milwaukee, or Chicago," says a merchant in Sault Ste. Marie, largest city in the Upper Peninsula, about 55 miles north of the bridge's northern terminus. He gets his merchandise from the East and South via those cities, rather than Detroit.

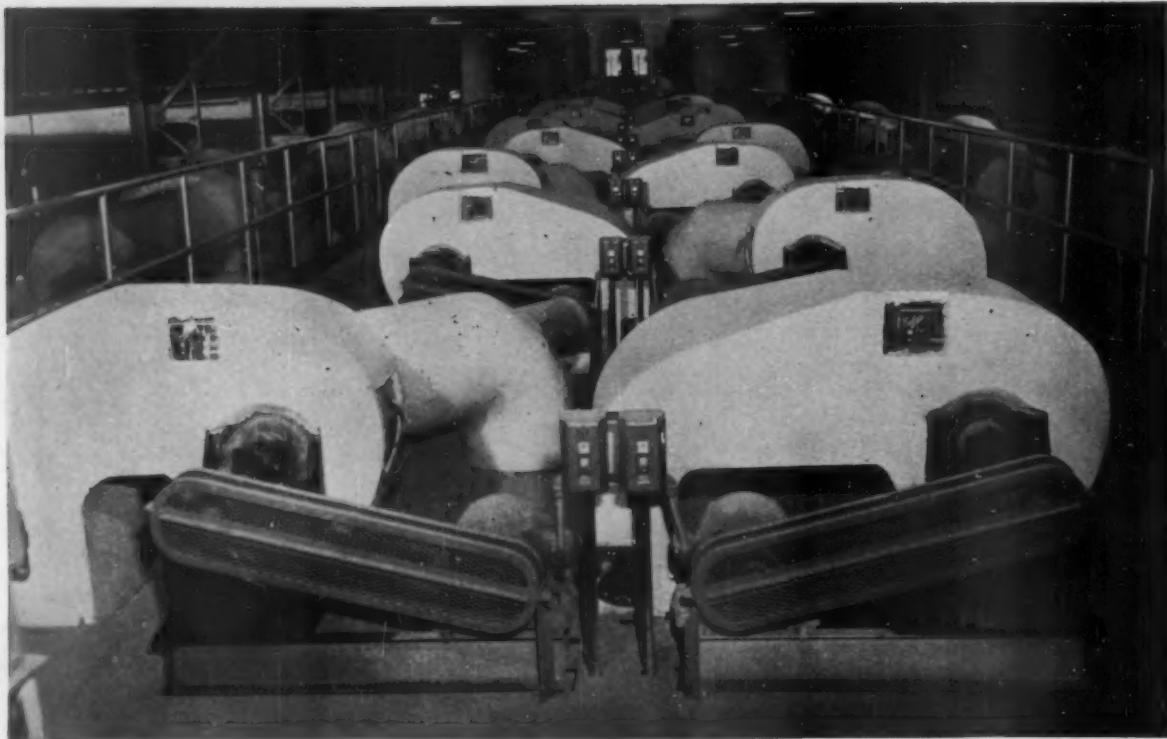
- **Rejuvenation**—Explored by French fur traders more than 300 years ago, the Upper Peninsula became part of

Michigan in the 1830s when Pres. Andrew Jackson used it to smooth Michigan's feathers in a border dispute with Ohio over Toledo.

The Upper Peninsula boomed in the latter part of the 19th Century, when iron and copper mines drew settlers and money. The region's timber, it is said, rebuilt Chicago after the fire, and much of it still stands in other cities such as Milwaukee. But when the mines were worked out and timber cut down, the area declined rapidly.

Now it's felt that the bridge is capping a seven-year-old economic rejuvenation spurred by the Upper Peninsula Development Bureau in Marquette.

- **Spadework**—First proposed in 1884—when wealthy Chicago, Detroit, and



FAN'cy *adj. Above real value; superior; above average ...Webster*

More and more ventilating and air conditioning jobs today require some pretty fancy, above average planning to locate all units in the allotted space!

Here, the complete selection of "Buffalo" Fans makes your space go further. You have real flexibility as to discharge direction for shortest piping, and choice of the most compact drive arrangement to fit the space. You can use a single large fan or multiple small units — "Buffalo" Type BL Fans are built in 1,000 to 500,000 cfm capacities. You can use a wide group of "Buffalo" Fans for roof installation. You can mount "Buffalo" Axial Flow Fans anywhere in straight ductwork. And for your high-

pressure conduit systems, you can get "Buffalo" Type BLH Fans in all sizes and arrangements.

But today's jobs require some pretty fancy performance, too! Here again, "Buffalo" delivers — above average — as it has for the past 80 years. In every "Buffalo" Fan, there is the "Q" Factor of built-in Quality that means long life and satisfaction on the job. And there's nothing static about this Quality — it's continually advancing through "Buffalo" research, development and testing — to give you the broadest line and the best performance whenever you specify "Buffalo".

BUFFALO FORGE COMPANY

BUFFALO, NEW YORK

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.



VENTILATING AIR CLEANING AIR TEMPERING INDUCED DRAFT EXHAUSTING FORCED DRAFT COOLING HEATING PRESSURE BLOWING

St. Louis families were making isolated and still auto-less Mackinac Island a summer haven—the bridge got no serious consideration until the highway boom of the 1920s. In response to demands for a way to cross the water link between Lake Michigan and Lake Huron, the State Highway Dept. began a ferry service in 1923.

A Mackinac Bridge Authority was formed in the 1930s to persuade the federal government to build a bridge as part of its recovery program. Efforts failed, but the state finally built a 4,200-ft. causeway out from the northern side of the straits as a start for a bridge and to shorten the 50-min. ferry crossing. But the causeway was never used; larger ferry boats were built, and in 1947 the state abolished the authority.

No sooner had this been done, than summer vacationers began lining up at the docks at Mackinaw City and St. Ignace (southern and northern ends of the bridge, respectively), and pressure for a bridge began again.

The pressure came from Prentiss M. Brown, a former U.S. senator and retired chairman of Detroit Edison Co. Brown finally succeeded in having a new authority created "to study the feasibility" of a structure.

II. Floes and Finance

It turned out that "feasibility" added up to two things:

- Could the bridge withstand fierce currents that could toss spray 40 ft. in the air, and high winds that push enormous ice blocks through the straits at motorboat speed?

- Would the bridge be able to collect enough revenue to become self-liquidating?

To the first question, New York bridge engineer Dr. David B. Steinman answered "Yes." A howl from geologists, who said the rock formation under the straits wouldn't support a bridge, was silenced by other geologists.

To answer the second, the authority hired Coverdale & Colpitts—a consulting traffic engineering firm—which decided that the bridge could be paid for. To skeptics who doubted that a short (2½-month) tourist season could justify such an expensive project, bridge boosters pointed out that tourists are second only to the automobile industry in producing revenue for Michigan.

- **Money Woes**—In 1952, the legislature authorized efforts to finance the bridge. Brown, as chairman of the authority, tried to get the Reconstruction Finance Corp. to pick up the tab, but in the middle of negotiations, RFC died.

The authority next turned to a New York underwriting house. The bridge bonds were ready, but in the spring of

1953 there were no takers in a tight money market. As an added incentive, the legislature agreed to have the state underwrite the maintenance costs of the bridge up to \$417,000 annually. But, cagey politicians stipulated that the bonds had to be sold by the end of 1953.

In November, Allen & Co., proposed that the authority issue two series of bonds—\$79.6-million in series "A" for actual construction and \$20-million series "B" (second mortgage) bonds to pay interest on the construction money until revenues began pouring in.

The bonds sold slowly, but actual construction on the bridge began. With a distance of 8,614 ft. from cable anchorage to cable anchorage, the Mackinac Bridge outdistances San Francisco's Golden Gate. Merritt-Chapman & Scott Corp. built the foundations, and American Bridge Div. of U.S. Steel Corp. did the superstructure.

III. Tourist Business

Brown and Lawrence A. Rubin, executive secretary of the authority, see the bridge as a boon primarily to the tourist business, not only in the Upper Peninsula, but in the Lower Peninsula (northern Michigan) as well.

C. A. Paquin, Soo Chamber of Commerce manager, believes the bridge will help stretch the region's summer season into October, with motorists seeking the beauty of fall colors in the second-growth woods. From there, the hunting seasons—birds, deer, bear—will pick up and hold the traffic until the winter months. After that, the Upper Peninsula hopes that winter sports will draw motorists from the metropolitan areas eight hours away. And for the spring months, there's the lure of trout.

- **Dissenting Voices**—There are dissenting words on the tourist business, however. "The deer hunters will come up here for a couple of years until they find it's not as good as farther south," predicts a sporting goods store owner.

One St. Ignace merchant thinks the town may be hurt more by the economic blow to families of the unemployed ferry boat crews and the loss of construction workers' business than helped by additional tourist trade.

IV. Industrial Revival?

The biggest hope of businessmen in Sault Ste. Marie and other population centers is that the new bridge will attract small plants into the Upper Peninsula to supply heavy industry in Southern Michigan. They point out that the bridge—by eliminating the average year-round three-hour delay time for the ferry—actually brings the rest of

the state 150 miles closer. "Don't forget that three hours costs a trucker roughly \$50," says Gerald L. Johnson, director of the industrial division of the development bureau.

Johnson believes that the straits have always represented a psychological barrier, even with the ferry crossing available. And he observes that new technology in ore processing (BW—Oct. 12 '57, p. 32) and use of second-growth timber (Celotex is building a \$6-million fiber board plant at L'Anse) is rejuvenating the western part of the Upper Peninsula. The bridge, he adds, may give impetus to the eastern end.

- **Traffic Boost**—Chmn. Brown looks at the bridge more in terms of traffic than economic effects. "Look at the map," he says, "and you'll see that the bridge makes possible the logical route from the U.S. and Canadian East to the Northwest and Western Canada."

Brown also sees the bridge as a funnel for American traffic into the new virgin vacation lands of Ontario, and to the uranium ore fields to the east at Blind River.

V. The Payoff

To meet bond payments, the bridge will charge tolls ranging from \$3.25 for a car and all its passengers to \$14 for the largest trucks. Coverdale & Colpitts predicted that the bridge would induce a traffic increase of 75% over that carried by the ferry system, and estimated that more than 1.9-million vehicles would cross in 1958—double that carried by the ferries in 1955, their biggest year.

Although the financial success of the bridge depends on the induced traffic, Brown believes that the bridge will do even better, thus making it possible to refinance and lower the tolls.

As evidence that the bridge was a success even before it opened, Brown points to the 6% increase in ferry traffic this year—much of it composed of tourists who came to see the bridge construction and to the real estate boom in the Upper Peninsula.

For example, road frontage even in remote spots, has jumped from \$5 a foot to \$30, and for gas station or motel sites it has gone as high as \$125; frontage along the St. Mary's River east of the Soo has tripled; and raw woodland has gone from \$100 for a 40-acre tract to \$600.

- To ease the 300-mile drive from Detroit to the bridge, Michigan Highway Commissioner John C. Mackie last month announced plans to build superhighways from the bridge approaches all the way to the Ohio and Indiana lines. The Upper Peninsula looks on this program as a real crutch for the bridge. **END**

Look what Riegel paper is doing:

- * Tells who's where, who's who
- * Guards frosting guarantee
- * Protects all-purpose adhesive
- * Social lions and business tigers find this pocket phone and address index is just the answer for keeping track of who's where, who's who.



Riegel helps make the index a success by supplying the long-lasting pressboard cards that keep essential phone numbers and addresses clear and legible in spite of rough and tough pocket wear.

* **Jewel's delicious frosting mix** guarantees "money back with a smile." And Riegel's Pouchpak*



helps keep "customers with a smile." This special packaging paper locks in delicate flavors, protects fluffy ingredients, keeps fine powders from sifting out. It's engineered packaging by Riegel.

WT. M.

* "Send me a couple of pages of glue!" That sounds strange, but it's happening every day, now, thanks to a new pressure-sensitive adhesive film that sticks to almost everything. Fortunately, there's one thing it doesn't stick to: Riegelease, a special Riegel release paper that peels off the film with no trouble at all.

* When you're stuck with a problem, one of Riegel's 600 different kinds of paper may help. Write Riegel Paper Corporation, P. O. Box 250, New York 16.

Now...what can we do for you?

Riegel

TECHNICAL PAPERS FOR INDUSTRY

The Income Pattern: Business Week's Regional Income Indexes

U. S. Incomes: Up 5.3% From Last Year



©BUSINESS WEEK

Federal Reserve District	% Change vs. year ago	The Indexes		
		Aug. 1957	July 1957	Aug. 1956
1. Boston	+ 2.6%	283.3	284.6	276.0
2. New York	+ 6.3%	313.4	306.6	294.7
3. Philadelphia	+ 4.7%	303.0	303.6	289.3
4. Cleveland	+ 4.8%	353.6	354.0	337.5
5. Richmond	+ 5.5%	383.2	380.7	363.1
6. Atlanta	+ 6.9%	479.3	478.4	448.4
7. Chicago	+ 6.3%	363.4	361.2	342.0
8. St. Louis	+ 3.7%	338.7	337.2	326.6
9. Minneapolis	+ 8.3%	370.8	368.5	342.3
10. Kansas City	+ 6.6%	425.0	430.4	398.8
11. Dallas	+ 10.3%	529.8	534.4	480.5
12. San Francisco	+ 0.5%	402.1	408.9	400.1
Nation	+ 5.3%	364.5	363.8	346.2

1941 = 100; adjusted for seasonal, August figures preliminary, July revised.

August Hits Another High

U. S. incomes were 5.3% above year-ago month, with Dallas leading comparison for third consecutive month.

U. S. incomes in August were 5.3% above their year-ago level, according to BUSINESS WEEK's Composite of Regional Income Indexes. Gains ranged from 0.5% in San Francisco to 10.3% in Dallas, with Dallas leader in the year-to-year comparison for the third month in a row.

San Francisco's rather weak rise reflects the sharp increase from July to August, 1956, compared with a decline in the similar 1957 period. It was the smallest year-to-year gain since August, 1954. California, one of the largest segments of Region 12, reported more

workers employed in manufacturing industries there in August than at any time in the state's history. Despite the new record, the year-to-year margin was smaller than in any month since February, 1955. Also, the July to August employment gain was the smallest since 1954. The uptrend in factory employment in the state has been tapering off since the start of 1956.

Nationwide, incomes were up 0.2% from July to August. For the regions, there were as many pluses as minuses in the month-to-month comparison. Largest gain on this basis was 2.2% in New York; largest decline was -1.7% in San Francisco. August incomes reached new highs in five regions—New York, Richmond, Atlanta, St. Louis, and Minneapolis. And for the U. S. as a whole incomes were at their thirteenth consecutive high in August. END



ATOP THE BY-PRODUCT COKE OVENS AT J&L'S PITTSBURGH WORKS, WHERE COKE IS MADE FOR BLAST FURNACES

PHOTO BY MASSAR

First with New Plant for Purifying Coal Chemicals

The habit of progress at Jones & Laughlin benefits our customers in many ways. For example, J&L is first in the nation to install a complete "aromatics purification plant" for refining coal chemicals—by-products of coke-making.

In its new \$2 million plant, J&L now refines benzene, toluene, and xylene—"aromatic hydrocarbons"—by advanced techniques that deliver chemicals of extreme purity.

These chemicals are used by our customers to make many useful products, including man-made fibers, rubber, insecticides, plastics, dyes, and drugs.

This is another example of how the habit of progress at J&L helps provide better living for all.



Jones & Laughlin
STEEL CORPORATION · PITTSBURGH

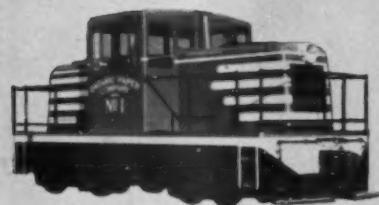
J & L . . . A G R E A T N A M E I N S T E E L



J. Neils Lumber Co., 45-Tonner



Mississippi Lime Co., 25-Tonner



Ontario Paper Co., Ltd., 45-Tonner



Imperial Oil, Ltd., 35-Tonner



St. Regis Paper Co., 80-Tonner



Lone Star Cement Corp., 25-Tonner



Atlantic Steel Co., 80-Tonner



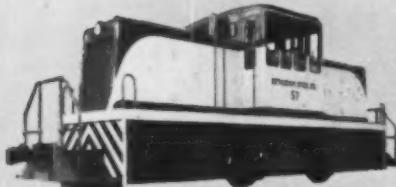
Peerless Cement Corp., 25-Tonner



Niagara Mohawk Power Corp., 80-Tonner



Hoover Electrochemical Co., 65-Tonner



Bethlehem Steel Co., 50-Tonner



The Pacific Lumber Co., Super 80-Tonner



Phoenix Iron & Steel Co., 80-Tonner



American Viscose Corp., 45-Tonner



Carolina Power & Light Co., 35-Tonner

**Why these important companies,
large and small, use
General Electric industrial locomotives**



Panther Valley Coal Co., 80-Tonner



American Smelting and Refining Co., 80-Tonner



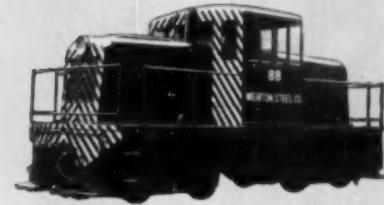
The Timken Roller Bearing Company, 80-Tonner



Consolidated Rock Products Co., 65-Tonner



Crossett Chemical Co., 45-Tonner



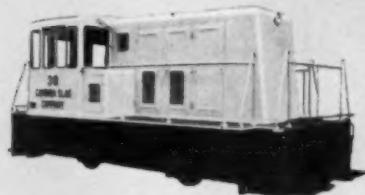
Weirton Steel Co., 45-Tonner



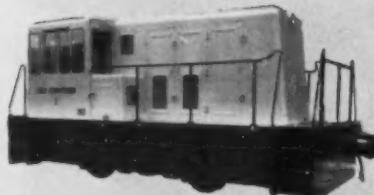
Omaha Public Power District, 45-Tonner



Holly Sugar Corp., 25-Tonner



Cambria Slag Co., 35-Tonner



West Penn Power Co., 35-Tonner



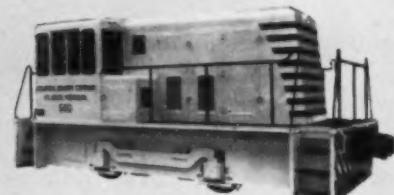
Penn-Dixie Cement Corp., 80-Tonner



Southwest Steel Corp., 45-Tonner



National Gypsum Company, 45-Tonner



Columbia Quarry Co., 35-Tonner



Columbia-Geneva Steel Division
U.S. Steel Corp., 80-Tonner

The locomotives you see here are only thirty of the more than 2500 General Electric locomotives working for industrial companies all over the world. Hauling a wide variety of loads, these diesel-electrics must and do perform under all kinds of working conditions.

Because G-E diesel-electric locomotives have proven themselves economical to operate, easy to maintain, and long lived . . . it's easy to see why industries use more General Electric industrial locomotives than all others.

IF YOU'D LIKE MORE INFORMATION about General Electric industrial locomotives and how they can serve your needs, mail the attached coupon for our new, informative folder, "How to Improve Your Plant Haulage with a General Electric Locomotive." Or for a complete survey of your plant's haulage requirements without cost or obligation, contact your General Electric Apparatus Sales Office. General Electric Co., Locomotive & Car Equipment Dept., Erie, Pa.

General Electric Co., Section C120-93
Schenectady 5, N. Y.

Please send me, free of charge, your new folder with facts on improving plant haulage.

Name _____

Title _____

Company Address _____

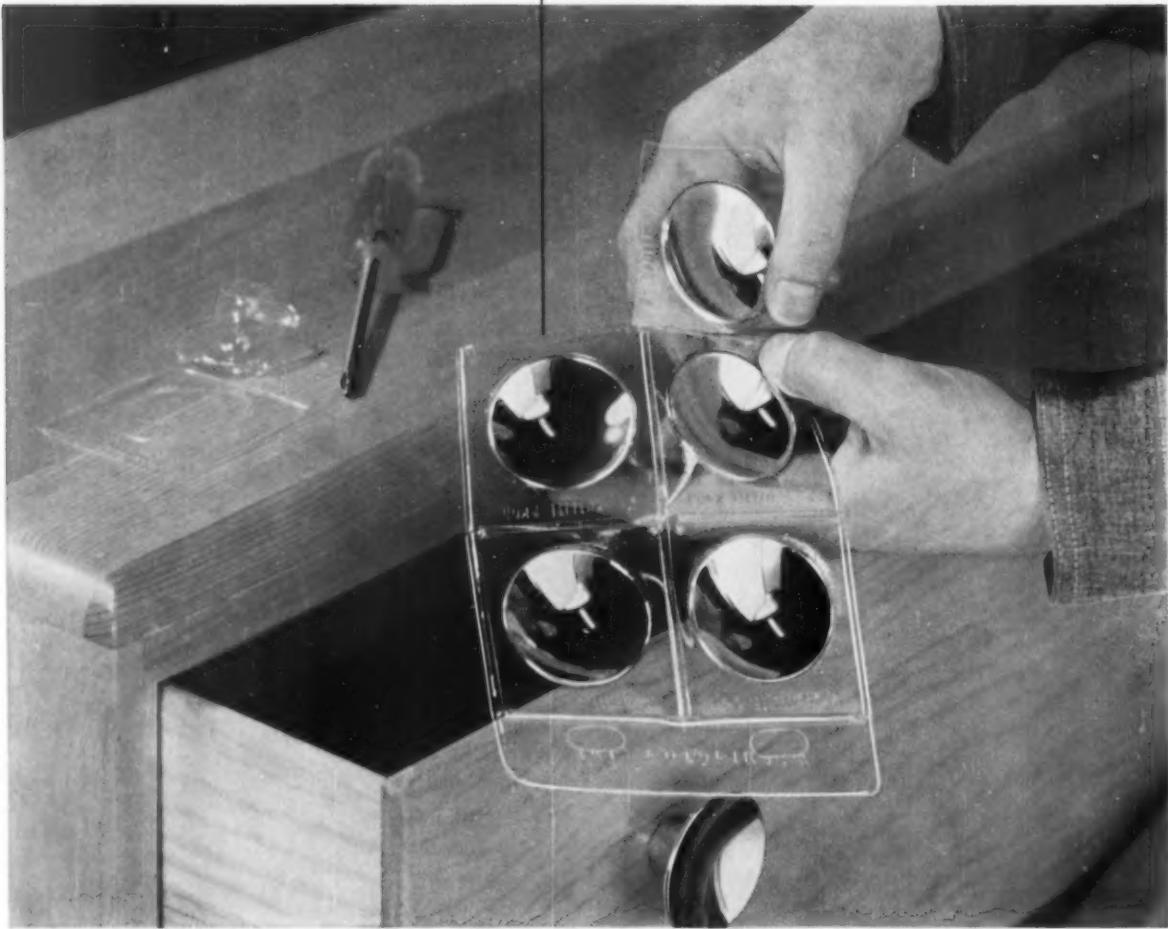
City _____ State _____

GENERAL  **ELECTRIC**

Kodapak Sheet

Kodapak is a trademark

gets hard wear
with hardware . . .



*Selling hardware items by the set has always
been the dream of variety-store merchandisers.*

Kodapak Sheet makes this dream a practical reality.

Because Kodapak Sheet is tough, durable, of great tensile strength—drawer pulls, hinges, and dozens of other items may be skin-packed together, with their proper fasteners.

Because Kodapak Sheet is crystal-clear, colorless, customers can examine every detail of the merchandise without touching it.

Because Kodapak Sheet is easily fabricated, a great variety of package forms are possible.

Whatever package requirements, it will pay you to call our representative or write for literature, together with names of firms using Kodapak Sheet or handling it.



MAKES GOOD MERCHANDISE SELL BETTER

Cellulose Products Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Sales Offices: New York, Chicago, Atlanta. Sales Representatives: Cleveland, Philadelphia, Providence. Distributors: San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.); Toronto, Montreal (Paper Sales, Ltd.)

Original packages designed for Washington Steel Products, Inc., Tacoma, Wash. by Western Plastics Corporation, Tacoma, Wash. Production equipment and additional packages designed and produced by Washington Steel Products.

INTERNATIONAL OUTLOOK

BUSINESS WEEK
NOV. 2, 1957



The Communist Party machine, with Khrushchev on top, now holds the reins of power in the Soviet Union. For Khrushchev, there will be more personal authority; for the party, control over the military establishment.

That much is clear from the sudden and still mysterious removal of Marshal Zhukov from his position as Defense Minister and No. 2 man in the U.S.S.R.

For some months now, the Communist Party and the Red Army have shared authority in a system of double power. While there is no evidence to indicate that Zhukov was conspiring against Khrushchev, he had become a near-Napoleon—with enough power to challenge the party in time of crisis.

To this extent, Khrushchev seems to have engineered a preventive revolution against a Red Army dictatorship.

Khrushchev's determination to clamp party control over the Red Army has these extremely important angles:

- After Stalin's death, Zhukov gradually destroyed almost the entire Bolshevik system of Red Army political commissars. Zhukov maintained that the commissar system hurt military discipline and professional spirit. Now it looks as if Khrushchev means to reestablish the system as it existed under Stalin.

- After the liquidation of secret police chief Beria, the Ministry of Defense acquired a good part of the MVD's industrial empire, including the military atomic agency. Then the Defense Ministry gradually penetrated the aircraft industry and finally the central economic planning authority. Presumably it will now be shorn of most such acquisitions.

- Since Stalin's death, the Soviet Union has had no acknowledged supreme military commander. But it seems that the final military authority, including control over the air-atomic branches of the Soviet Air Force, had been slipping into Zhukov's hands. With Marshal Malinovsky as Defense Minister, this ultimate power will be turned over to the Presidium—or to Khrushchev himself.

It's too soon to say what this whole business means for East-West relations. Here in the U.S., observers tend to feel that such developments are a sign of strain within the U.S.S.R.—and thus all to the good. But in Western Europe, there is some fear that the Moscow shakeup may parallel Hitler's removal of some German generals in 1938, as a prelude to a more adventurous foreign policy.

Khrushchev's glib peace talk this week—at a Turkish diplomatic reception in Moscow—doesn't cheer the gloomy forecasters. To them, it proves only that the heat is off Turkey momentarily.

—•—

The Atlantic Alliance will get a lift from Pres. Eisenhower's plan to attend a NATO Council meeting in Paris next month. Eisenhower wouldn't be making the trip to Europe, his first since he became President, unless he intended to put his weight behind plans for a stronger NATO.

The special NATO session may provide Secy. Gen. Spaak a chance to launch his plan to give NATO an economic commander in chief. But

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
NOV. 2, 1957

translating such an idea into action won't be easy. You have to remember that there are diverse political groups within each of the NATO countries. In the U.S., Britain, and France, there are domestic parliamentary battles over such things as defense spending, foreign aid, and trade policy. And the differences sometimes have to be handled with kid gloves.

State Dept. officials feel privately that the real payoff for the Eisenhower-Macmillan meeting may be found in the new confidence between Secy. of State Dulles and British Foreign Secy. Lloyd.

As Lloyd boarded a plane for London, he told Dulles: "I'd better take out my first American citizenship papers." The implication is plain that he will be a frequent visitor to Washington. Dulles told aids later that it was the most satisfying international meeting he had ever had.

The two top diplomats talked about ways of making the Eisenhower-Macmillan understandings really work:

- On the political front, they agreed to use every means possible to settle the Syria-Turkish crisis through the United Nations.
- Dulles plugged for closer interdependence of all free world allies, with each nation contributing what it's best suited to provide. This is the real objective of the much emphasized plans for sharing atomic information.
- Economic discussion centered around aid programs for the Middle East. Lloyd came up with some fairly specific proposals. One was that Western aid follow closely the pattern of Britain's Colombo Plan in Southeast Asia. Under this program, the underdeveloped countries choose their own aid projects and administer them on their own initiative.

American and British officials agree today that the new atmosphere of cooperation must show concrete results pretty soon. Otherwise, they say all the recent talk will look like "a lot of hot air."

—•—

France is heading toward a full-scale economic breakdown—without any government to steer it off the rocks (page 108).

French politicians just can't seem to agree on a government to run the country. Socialist Guy Mollet—the fourth man to try—made the attempt to form an acceptable cabinet over last weekend. He failed. Now former Finance Minister Felix Gaillard, the young "financial wizard," is making the try.

Whatever the political outcome, France soon will have to seek a sizable foreign loan—probably from West Germany—or face such a reduction in imports of basic raw materials that an industrial slowdown will be inevitable. Without a loan, the country will have no choice but to cut all imports drastically.

—•—

In Guatemala, there doesn't seem to be any immediate Communist threat—despite last week's election blowup (page 116). A provisional government is back in the saddle. But on-the-spot observers believe non-Communist, leftist parties have now won a solid place in Guatemala's political life. As a result, an elected government may follow somewhat socialistic economic policies—to the left of those of Pres. Castillo Armas, who was assassinated last July. This new trend could spell trouble for U. S. investments there.

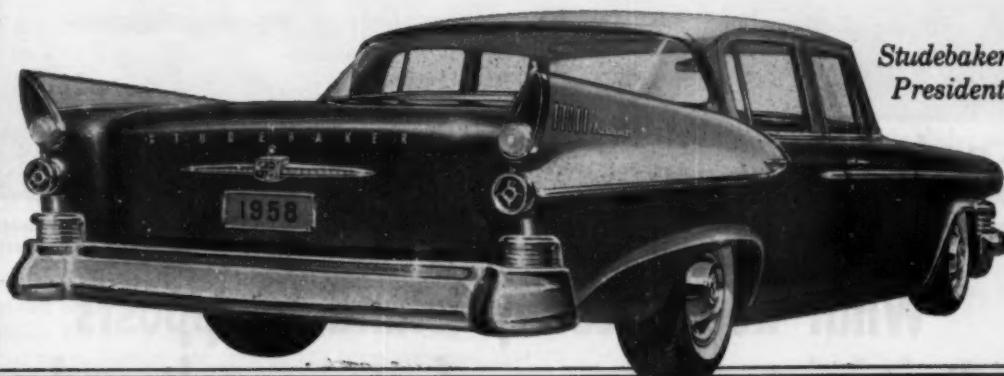
*Studebaker Commanders
and Champions*



From the Home of the Golden Hawks...

**Studebaker cars take on a
completely new luxury look for '58!**

*Studebaker
President*



Long, low Flight-Stream roof and Hawk-inspired body styling mark the new V-8 President and Commander . . . and the Champion Six . . . as outstanding leaders for 1958.

Interiors, too, set these '58 Studebakers apart . . . from color-correlated, deeply cushioned upholstery to safety cone steering wheel and Flight-Style instrument panel.

Exclusive variable rate springs and variable

ratio steering for easy handling combine with a new Luxury-Level ride to provide driving comfort unmatched even by cars costing hundreds of dollars more.

All this, plus dependable service, unsurpassed operating economy, and *proven* resale value makes a Studebaker the *one* automobile that every '58 car buyer should be sure to test! *Be sure to see the entire line . . . new sedans . . . new station wagons . . . and the famous Hawks.*

*Visit your Studebaker-Packard Dealer and
guest-drive the car of your choice . . . Today!*



Studebaker-Packard
CORPORATION

Where pride of Workmanship comes first!



N. Y. Daily News photo



SAFE BY THE SEA. Although New York's famous Coney Island boardwalk has undergone many changes in the last 34 years,

its old-time lampposts are still there. Corrosion-resisting Monel fastenings have held them securely for a generation.

What keeps Coney Island lampposts standing up to 34 years of storm, salt and sea?

One of the lampposts on Coney Island's popular boardwalk was taken down a few years ago ...

Inside its base, the work crew found a thirty-year accumulation of soggy rust flakes.

And under that? Four Monel* nickel-copper alloy nuts and bolts holding the post tightly to the boards. Threads as clean and sharp as new. An easy twist with a wrench and out came each Monel alloy fastening —

as fit and fine as the day it had been put in!

Anchoring lampposts to stand firm through 30 years or more of seaside duty may be a far cry from your metal problem. But whatever that problem is — corrosion, stress, fatigue, high or low temperature — its solution may very well be found in an Inco Nickel Alloy.

The International Nickel Company, Inc.
67 Wall Street New York 5, N. Y.

Remember, when you buy

INCO NICKEL  **... you also get**
INCO+SERVICES

Whenever you are looking for answers to your metal problems, all the information and help we can give you are yours for the asking. For instance ...

- † Corrosion Service
- † High Temperature Service
- † Fabrication Help
- † Foundry Service
- † Field Information Centers
- † Convenient Sales & Service
- † Technical Publications

* Registered trademark

INCO NICKEL ALLOYS
NICKEL ALLOYS PERFORM BETTER LONGER

In Washington

Investigation Hears How German Process Could Trim the Costs of Steelmaking

Technological progress in steel production may eventually serve to increase competition and lower the price of basic steel. That is the opinion of an expert in the continuous casting process who testified this week before the Kefauver Antitrust Subcommittee.

Chmn. Estes Kefauver (D-Tenn.) has been investigating the steel companies for what he terms their lack of price competitiveness. He already has had U.S. Steel and Bethlehem Steel officials on the carpet as a result of the uniform price rise of \$5.20 a ton last summer.

Rufus Easton of Koppers Co. told the subcommittee that in tests in producing 4-in.-square carbon steel billets, the continuous casting process cut \$5 to \$6 a ton off the conventional method. Koppers is the sole licensee of a continuous casting process developed by a German company and is in the business of building continuous casting equipment for U.S. metals processors.

While the method is being used commercially in both Europe and Canada, Easton said that not a single U.S. steel company now is using the continuous casting on an operational basis. The problem is that the process has not been refined to where it can turn out large-size shapes—say a slab 8 in. thick by 48 in. wide.

Easton thinks that the process may be perfected within another year, and, once he can get a major steel producer to try it, competitors will follow suit. The process eliminates several steps in the open-hearth process.

Easton told the subcommittee that it would not be economically feasible to replace conventional equipment with the continuous casting process. The main advantage would be in putting in new capacity or replacing worn-out capacity.

Russia has been experimenting with the process for several years, Easton said, and he has been informed that 50% of new Russian capacity to be put in by 1960 will be of the continuous casting process.

Lower Basin States Take a Stand On Plan to Divert Colorado River Water

The perennial argument about division of Colorado River water flared anew in Washington last week. This time, governors of six basin states plus a representative of California's Gov. Goodwin Knight debated their future prospects once the U.S. starts impounding water—four or five years from now—behind the new Glen Canyon Dam.

As the first and most important project in the \$1-billion upper Colorado project, Glen Canyon is viewed as a threat by the lower basin states of California, Arizona, and Nevada.

In an unprecedented display of unity, spokesmen for

MORE NEWS ABOUT GOVERNMENT ON

- P. 154 Basic Research Gets a Lift
- P. 154 Atomic Clue to Britain's Wind-scale Disaster

the three states argued that Interior Dept. plans reflect "cash register pressure" to make Glen Canyon pay off handsomely and quickly. Their fear: extraordinary diversion to Glen Canyon that would drastically reduce flow of water for downstream irrigation, domestic and industrial uses, especially generating capacity at Hoover Dam, on which their states rely heavily for power.

The protests were directed against a tentative draft of plans for Glen Canyon that Interior Dept. must send to Congress next year. California, Arizona, and Nevada argued for specific guarantees that (1) the U.S. will honor Hoover Dam power contracts, and (2) at least 50% of excess inflow into Glen Canyon in any given year will be released for downstream users. Governors of upper basin states—Colorado, Utah, Wyoming, and New Mexico—scolded at the fears, but will take no formal position until they study the proposals at length.

Industry Sees a Fresh Pool of Engineers As Colleges Report Record Registrations

The U.S. Office of Education reports that an all-time high of 277,052 students were enrolled last year for engineering studies in U.S. colleges and universities.

Its statistical report, published this week, disclosed these major trends:

- Undergraduates seeking bachelor degrees in engineering have been more numerous each year since 1951, totaling 251,121 in fall of 1956, a 13% rise from 1955.
- Last fall's freshman engineering class of 77,738 was second largest in history.
- Enrollments for master's last year numbered 22,529, up 20% over 1955; enrollments for doctorates, 3,402, up 7.6% in the year.

Swiss Fail to Move Court In Battle for Return of GAF

A procedural ruling by the International Court of Justice last week leaves the fate of the assets of General Aniline & Film Corp.—seized during World War II as alien property—exactly where it was: in the hands of the U.S. Supreme Court.

The International Court rejected a request by the Swiss government, which wanted an order preventing sale of the huge chemical and dye company until after the world tribunal rules on the Swiss claim that the U.S. must return the property to its former owners.

The court, in a 14-to-1 ruling—the Russian member cast the sole dissent—held that there "is no need" for protective measures now, because the U.S. has no present schedule to sell GAF. The reason is, of course, that the U.S. cannot sell it until a case for return—brought by the former owners—is decided by the Supreme Court.

Basic Research . . .

... gets a lift as Defense Secy. McElroy cancels a Wilson cut. Scientists urge a further stepup.

The first positive action to boost scientific research following the furor raised by Sputnik came this week when Defense Secy. Neil H. McElroy canceled a two-month-old order by his predecessor, Charles E. Wilson, that cut military research spending by 10%.

McElroy's action will restore \$170-million for research programs—to the level approved by Congress for fiscal 1958. Wilson's order had required the military services to use at least 10% of R&D appropriations to pay for manufacture of prototypes for testing. Normally, this cost is covered by procurement appropriations.

But McElroy's move does not mean a lift in the \$38-billion over-all military expenditure level. The new Secretary made it clear that the restoration of research money will be made "within the over-all resources currently available to the military departments."

The universities, industries, and non-profit organizations that do the bulk of military research will get the big benefits from the move. It was the sharp curtailment or cancellation of university work that brought charges a few weeks back that the nation's research programs were being gutted to conform to Pres. Eisenhower's spending ceiling.

• **Foundation Report**—This week, still another voice urged the nation to sharpen its scientific efforts. The National Science Foundation, in a special report to the President, proposed ambitious measures to step up scientific activity.

The report, "Basic Research—a National Resource," stays clear of the manpower shortage. It focuses on what it terms "the very real need to foster, by increased financial support and all other methods, a national atmosphere in which basic research may continue to flourish."

• **Interaction**—Actually, the two problems are interrelated, says the report. Science will attract more young people as the conditions promoting its free growth and prestige become established on a wider basis.

Here are the principal points urged by Director Dr. Alan T. Waterman:

- Private industry should give more unrestricted funds to institutions, and conduct more basic research in its own laboratories.

- State governments should be en-

couraged to step up support for basic research.

- More incentives should be offered—including federal tax relief—to increase gifts for basic research.

- The government should cut back on the amount of developmental work it has under contract to universities and colleges while increasing its support of basic research. Government grants should provide for education and training of more scientists in all fields where evidence shows that competent persons are hampered by lack of money.

The foundation's recommendations, coming when national attention is focused on research, will not be brushed aside. But, whether they result in any concrete action is another matter.

- **Point of Agreement**—It's accepted that more money and effort need to be pumped into basic research. This week's Defense Dept. action is a good example. In fact, Dr. Waterman in his report says that "the foundation has been able to provide grants to only about one-third of the investigators [scientists] applying for basic research funds for proposed work judged by scientist reviewers to have great merit."

There is no dollar mark set on how much basic research programs should be stepped up.

Currently, the nation is spending from \$9-billion to \$10-billion a year for research and development. Industry accounts for around \$7.3-billion, according to a recent McGraw-Hill survey. For the balance, the Defense Dept. is the big spender—\$1.7-billion. But this covers all phases of research and development. Actual outlays for basic research are only 5% to 10% as much. And this is the area that the National Foundation wants boosted.

- **Steady Growth**—The foundation itself, dealing only in basic research, has steadily increased its spending from \$225,000 in 1951, the first year Congress appropriated money for it, to \$40-million for this fiscal year. Consistently, however, Congress has given the foundation less than it asked.

The foundation came into being as a result of the National Science Foundation Act of 1950. Its director, Dr. Waterman, was appointed by Pres. Truman in 1951.

- **Split Views**—Arguments can be found on both sides as to just how effective the foundation has been in carrying out its duties. Critics say it has not proved the strong guidance that Congress intended. Others, however, say it is a new agency feeling its way, and making a point of trying not to march rough shod and direct research activities. Instead, they argue, it is quietly having more of a say in matters and growing stronger as it goes. The current set of recommendations are the strongest it has made to date.

Atomic Clue

Britain's near-disaster is linked in new reports to production of material for fusion experiments.

Latest reports concerning Britain's Oct. 10 atomic accident point to a possible link between the runaway reactor at the Windscale atomic plant and the experiments at the Harwell laboratories looking toward an eventual taming of the hydrogen fusion reaction for power (BW—Sep. 28 '57, p42).

It now appears possible that the manufacture of tritium for the Harwell experiments could have led to the Windscale near-catastrophe (BW—Oct. 26 '57, p52). According to the scientific editor of the Manchester Guardian, deuterium contained under high pressure in specially designed cans was being irradiated in the Windscale pile to produce tritium. Deuterium and tritium are heavy isotopes of hydrogen. Both are used in the Harwell experiments—and tritium is in very short supply.

This new aspect of the situation would account for several previously mystifying features of the Windscale incident. And the availability of tritium might explain Harwell's reputed lead in the thermonuclear—or hydrogen fusion—reaction.

- **How It Looks Now**—This is the way the situation now looks to have been on the night of Oct. 10.

Physicists were forced to contain the high-pressure deuterium in cans of light material that would not absorb many neutrons, so as not to upset the reaction in the pile. This material was judged to be strong enough at normal temperatures. But when the pile temperature was raised for routine annealing of graphite in the core, the cans burst.

Since deuterium behaves chemically like ordinary hydrogen, there was an explosion at temperatures high enough to melt nearby aluminum-clad uranium fuel elements. Oxygen in the forced air draft by which core temperatures were being controlled led to rapid oxidation of the uranium. So a cloud of uranium oxide, together with the fission products originally locked up in the cans, was carried out through the chimney in the cooling air stream.

That brought the ugly dilemma for which the physicists were unprepared: how to reduce the temperature quickly. Continuing the air stream would send more fission products out the chimney; stopping it would extend the combustion region. Water—the eventual solution—could not be used until lengthy calculations showed it was safe. **END**

Time to Change Adman's 15%?

● **Mutterings over the advertising agencies' 15% commission system have finally emerged into statistics.**

● **A sizable segment of the nation's big advertisers, says the Frey report, is dissatisfied with the way it works.**

● **Many agencies also expect some changes, although most maintain their profits are slim even on 15%.**

This week the advertising world got statistical confirmation for what a growing number of advertisers, their agencies, and media executives have privately admitted all along.

The long-standing, almost universally accepted flat 15% commission method of agency compensation for services rendered to their clients is ripe for some changes.

At the annual meeting of the Assn. of National Advertisers in Atlantic City, Albert Frey, professor of marketing at Dartmouth's Amos Tuck School of Business Administration, unveiled preliminary findings of his study of advertising agency services and compensation methods. He and his associate, Prof. Kenneth R. Davis, had been hired as independent researchers by ANA to conduct the months-long investigation.

To anyone familiar with the advertising business as it exists today, there was nothing particularly startling about Frey's report. The changing character of ad agencies and the way they are paid has been grist for Madison Avenue conversation mills for a long time.

● **Today's Setup**—Under the present system, the media bill advertising agencies at their published full space or time rate minus 15% (there's an added 2% discount for prompt payment). In turn, the agency bills its advertising client the full 100% rate. Thus the media pay the agency for services that, in effect, the agency is rendering the advertiser. In addition, agencies traditionally collect a 15% commission on the cost of producing necessary material supplied the media—engravings, advertising mats, and (in the case of radio and TV) the talent or entertainment that goes along with the advertising message.

This, in brief, is the financial arrangement common to almost all advertising.

Around this system of compensation have grown some of the tensions that plague agency-client relationships.

What Frey and Davis attempted to

establish is some statistical measure of these tensions, based on interviews and broad-scale questionnaires to all parties concerned with the system.

I. Scope of the Report

According to the report, "the degree of dissatisfaction" over the present method of paying agencies shows up in these figures:

- 17% of the top advertising executives in companies that spend more than \$1-million think the 15% commission system is "neither satisfactory nor practical"—and another 31% think it's unsatisfactory but right now the most practical method.

- 36% of this growing group of \$1-million advertisers would rather have some method devised to exclude the media commission and, instead, pay agencies some flat sum for their services—and, more significantly for the agency business, they would like the right to buy space or time from a medium at the same rate that the medium charges the agencies.

- 22% of these advertisers (the percentage declines as you take in companies with smaller ad budgets) see important changes ahead in agency compensation—changes broad enough to establish an entirely new system.

- Finally, 38% think there'll be some changes in the system, but that the old 15% media commission will remain the dominant method.

If you accept Frey's report as statistically valid and representative, it isn't hard to see that many of the major advertisers expect changes in the 15% system.

- **Vested Interests**—Advertisers are the most likely to look askance at the current method. After all, they are the ones who foot the bill in the end. They have the biggest direct interest in getting more and better advertising at the best price possible.

And even though the majority of agencies prefer the orthodox system as

"the most practical method" of compensation, almost half the agencies—and about 40% of the media—in the study expect some changes. But only a slight percentage think that advertisers will get an opportunity to bypass agencies by buying space directly from media.

- **No Favorites**—The Frey report covers a lot more ground than just the advertising compensation problem. It takes stabs at company top management, which "frequently doesn't understand the function of the advertising agency . . . and second-guesses its own advertising department and the agency."

Advertising managers of companies are blamed for often not providing liaison between agency and company and for asking unnecessary services of the agency.

For their part, agencies are taken to task for "not infrequently" overlooking a client's total marketing problem, failing to have a cost accounting system that shows profit-and-loss results on each account. And "giving in too easily" to advertiser criticism just to keep the business.

II. Grounds for Grumbling

More than anything, though, Frey's report to the ANA this week brings into the open a growing restlessness among advertisers about the whole subject of agency compensation.

Such restlessness goes back almost to the beginning of advertising agencies, which (1) started out as direct agents for publishers, (2) became brokers of media "white space" by buying it from publishers as cheaply as possible and selling it as dearly as possible, and, finally, (3) took on their present form in which the advertiser—not the media—is a client of the agency.

Almost from its inception, the media commission system, with its standard 15% of gross advertising volume going to the agency, has been under attack. In the 1920s, the Federal Trade Commission attempted to upset the system and the rigid adherence to it. That case was thrown out, but in the 1930s the criticism revived.

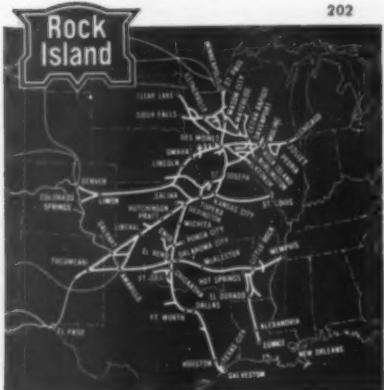
- **Entering Wedge**—However, not until last year was there much possibility of any significant breakdown in the 15% method. That's when the American Assn. of Advertising Agencies and some publishers' associations signed consent decrees that, in effect, prevent them from maintaining the commission system through joint action. These con-



Planning a move soon?

One moment, please, Mr. Manufacturer. Don't make a move toward a new plant site until you've checked carefully. We suggest, as a first step, that you ask us about the industrial possibilities existing in the Rock Island States. We've collected, collated and recorded all the facts you need about these busy, prosperous states and they are yours for the asking. Address

Industrial Department
ROCK ISLAND LINES
La Salle Street Station
Chicago 5, Illinois



sent decrees ended an antitrust action filed by the Justice Dept. in 1955 that charged the associations with restraint of trade and collusion in maintaining the 15% rate.

None of these groups ever admitted to the alleged practices. But the settlement did mean that henceforth, if the 15% commission method was to be maintained, it would have to be through the individual efforts of advertisers, agencies, and media—not by common consent among them.

For instance, under the decrees, a magazine can't refuse to do business with an agency simply because it isn't recognized as an accredited agency by the 4-A's or the Assn. of Business Publishers.

- **Solid Front**—Immediately after the decrees, most agencies and media put up an almost solid front by announcing they would maintain the 15% commission system on their own.

The vast majority of media refuse, for example, to allow an advertiser to place his advertising directly at 15% less than the published rates. They hold out, too, against so-called "house agencies"—those that are simply subsidiaries of advertisers set up to take advantage of the 15% lower rate. Similarly, media deny vigorously that they knowingly allow the 15% commission to agencies that rebate all or part of it to the advertiser—which would amount to a rate cut.

Thus, for the most part, the 15% still stands. But a lot of media and agency executives admit that it is under increasing pressure today.

- **Up and Up**—Partly this can be traced to the ever increasing size of advertising budgets. In the postwar period, advertising volume has soared to a rate above \$10-billion a year. When a company sees its advertising costs climbing sharply, it naturally wonders whether (1) the automatically higher commission the agency gets is too much and (2) whether the agency, since its chief reward comes from an ever bigger advertising volume, isn't swayed more by self-interest than by the good of its clients.

Such suspicions are probably unavoidable in a system that ties an agency's income (if not profits) to how much his client spends. This is especially true in a business where it's so hard to measure how much part advertising plays in a company's success.

- **TV Costs**—The question of compensation has been brought forcibly to the attention of advertisers as the cost of advertising soars—particularly in television. Agencies, as in printed media, collect 15% on time costs plus 15% on production costs. And the 15% the agency receives as a commission on the TV talent often far exceeds the commission for the time bought. Mostly,

advertisers complain that many shows are either produced by an outside group and sold as a package or are network produced.

In these cases, the amount of work agencies do in getting the show on the air is, at best, debatable.

III. What Next?

There's little question that agency compensation is in some sort of transition. Fee systems—in which the agency charges a flat amount but applies the 15% commission against it—have been long used but may develop variations. For instance, some agencies now collect the media commission, but bill clients for the time executives and personnel actually spend on the account. They don't give a cash rebate if there is a difference, but do offer either (1) more services to account for the differences or (2) allow this difference to be applied to future service.

In some cases, too, agencies have agreed not to take a 15% commission on production costs; they bill the advertiser at net.

More common, though, has been a steady growth of free services as one way of providing advertisers with more for their growing advertising outlays.

What's more, you can pick up rumors that some agencies—one way or another—are rebating part of their commissions.

- **Thin Margin**—But reputable agencies insist that the 15% commission system returns them only about 1%-2% profit, a margin that they say is hardly out of line. In the Frey report, a majority think they should get more than 15%. Their own costs have risen, they say, and it is impossible to attach exact cost-accounting methods to the kind of talent that goes into advertising.

More and more agencies are, however, refining their cost-accounting systems or installing new ones so they are able to assign to each client a profit-and-loss figure. Mostly, this is for internal guidance, but it could become the basis for some new kind of agency-client relationship.

Despite all the furor, it is unlikely the Frey report will set off any major change in agency-client financial relations. There is probably a lot more individual negotiation—over what extra services to provide, for instance—than ever before.

Any major break in the 15% system—if it comes at all—will probably have to wait until some large advertiser and important agency come out publicly with a new plan. But even then the change will be evolutionary, since the system is a deep-rooted part of the advertising business which over the years has provided a fairly clear-cut method of compensation in the unusual client-agency-media relationship. **END**



Workmen installing window walls made with Styrofoam core plastic laminated sandwich panels. Architect is Manson-Carver-Associates, General Contractor is Christman Company.

Styrofoam® insulation chosen for housing project at Michigan State University

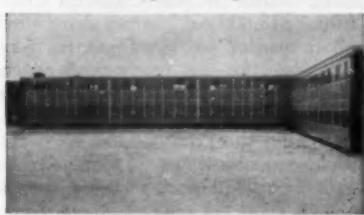
Class of '58 or '58—students will be assured of warm, dry rooms in this large, married students' housing project in East Lansing, Michigan. It's insu-

lated with Styrofoam, a Dow plastic foam.

Styrofoam was specified as insulation and filler for the building panels and as the perimeter insulation by the architectural firm of Manson-Carver-Associates. It has a low K factor that *stays low* because Styrofoam won't absorb water. It doesn't rot, mold, deteriorate or warp. In addition, Styrofoam is a rigid insulation with high compressive

strength. It makes panels stronger and won't pack down. Yet it's very light in weight.

If you need an outstanding insulation for curtain wall construction, perimeter or plaster base installations, cavity walls or low-temperature work—investigate Styrofoam. Contact your nearest Dow sales office today, THE DOW CHEMICAL COMPANY, Midland, Mich.



The new Michigan State University Married Students' Housing Project. There are 46 complete units housing 508 families.



YOU CAN DEPEND ON



Lorillard:

To back up Kent's rocket rise, set off by Reader's Digest plug, Pres. Gruber (left) has fistful of other bets all set.

Directly after the board meeting in August, 1956, at which he was elected president of P. Lorillard Co., the country's oldest tobacco company, Lewis Gruber (cover) strode to his new office. Picking up a telephone, he ordered the price of Kent cigarettes, the company's premium filter tip, cut to meet competition from lower-priced brands then dominating the filter market.

Within a month, he had taken steps that quickly led to an intensive research program aimed at developing an improved Kent filter.

These two actions set in motion a chain of events that reached its climax in July of this year. Late in that month, Reader's Digest informed its 10-million readers that Kent's new filter, then just on the market, removed more nicotine and tar from cigarette smoke than any other of the leading filters it had tested. The article went on to bestow an accolade on Lorillard and Gruber. It added up to a resounding plug for the product.

- **Stampede**—In the ensuing stampede, as loyal Digest readers and their friends rushed to retailers to buy the new filter tip, Kent sales skyrocketed. Lorillard put on more shifts at its plants, quadrupled production, but still had to allocate shipments. Even with the supply falling short of demand, Kent sales—which totaled 3.4-billion units last year—are currently running at an annual rate of 32-billion to 35-billion. Industry estimates are that with this second-half surge, the company should sell some 15-billion Kents this year. In its ads, Lorillard claims Kent is now the leading filter brand in New York, Los Angeles, Boston, and Philadelphia.

Last week Lorillard quietly put out third-quarter sales and earnings figures, based almost entirely on Kent's phenomenal performance. Sales were \$86.2-million, up from \$51.8-million for the same quarter last year. Earnings jumped from \$818,000, or 22¢ per share, in the 1956 quarter to \$3-million, or \$1.02 per share, for this year's third quarter. In the soft market of the past few weeks, Lorillard stock held its own.

- **Behind the Prodigy**—The Kent story understandably has dominated talk about Lorillard during recent months. Yet Kent's outstanding track record, and especially the smashing impact of the Reader's Digest article, tend to obscure both Gruber's own part in laying



BOOST IN ADS is one way Pres. Lewis Gruber (front) hopes to keep Lorillard's surge going; here he's with George Whitmore, ad brand manager, and V.P. Manuel Yellen.

Soaring Skyward on a Filter Tip

the groundwork for Kent's success, and—ever more important—other developments at Lorillard that will determine how the company can compete after the Digest influence has waned.

I. Doctor for Sick Company

Observers inside and outside Lorillard agree that Gruber brings to his job a sales and merchandising approach, coupled with a strong emphasis on research, that is revitalizing his company. His personal popularity in the tobacco industry is high.

Gruber came to the president's chair last year after 34 years with Lorillard that began as a field salesman calling on retailers. Since 1952 he had been vice-president and sales director.

• **Fever Chart**—When he took over, Gruber knew what he wanted to do, and knew that he had to act fast. Bluntly, Lorillard was sick. Its chief cigarette brands, Old Gold and Kent, were falling behind. Sales and earnings were in a tailspin for the third straight year. And ominously, its share of the cigarette market, already down to 5.7%—the smallest slice among the top six companies—was shrinking.

Further, it is generally known that Lorillard was afflicted with disagreements among its management—with Gruber opposing many company policies, such as maintaining the high Kent price.

• **Call for the Doctor**—Sometime during the spring of 1956, Distributors Group, Inc., managers of the mutual fund which is Lorillard's largest shareholder, had decided the time had come for action to remedy Lorillard's problems. In a survey it conducted among Lorillard branches and independent tobacco jobbers around the country, Gruber's name cropped up again and again.

Impressed, the fund decided to offer him the job. In best movie fashion, the group called Gruber in an hour before the scheduled board meeting to ask him what he would do as president. The story goes that Gruber rejected one plan that would have left him less free than he felt necessary, asked for and got a completely free hand.

• **Patient's Progress**—Today, a little more than a year later, Gruber is taking Lorillard in new directions. In addition to his contribution to Kent's success, he has:

- Created a new management team, largely drawn from lower company echelons. Executive V.-P. Irvin H. Peak is an exception, but these others all rose under Gruber: Harold F. Tem-

ple, vice-president and director of sales; Manuel Yellen, vice-president and director of advertising and marketing; George O. Davies, vice-president and director of finance; and George A. Hoffman, director of manufacturing.

- Set up a research laboratory at Lorillard's modern Greensboro (N.C.) plant, and given Dr. Harris B. Parmelee, vice-president and director of research, wide powers. This stepped-up research drive, already paying off with Kent, will produce startling results soon, Gruber promises.

- Put on the market a new cigarette, Newport, as an entry in the menthol stakes. The menthol market, led by Kool and Salem, currently accounts for only about 6% of cigarette sales, but it is growing. As usual with a new label, Newport is not yet contributing to earnings. But sales for the first half of this year hit around 200-million units and jobbers report it is going well.

- Glamorized Old Gold Filters with trim new packaging in a drive to create a new personality for the flagging brand. In the first half of this year, Old Gold Filters sold an estimated 3.1-billion units, up 24% over 1956's first half. This gain, though, did not compensate for declines in king-size and regular Old Golds.

- Put fresh impetus into Lorillard's advertising. The ad budget for this year is on the low side of \$18-million, up from around \$14.8-million last year. Most of the dollars are going into TV, including three network shows. Better than \$7.5-million is allocated to Kent. Gruber also consolidated agencies by moving Kent and Newport accounts from Young & Rubicam to Lennen & Newell, which had Old Golds. He believes that sticking to one agency permits greater efficiency and flexibility in over-all planning, and is more economical.

II. Kent's Rocket Take-Off

These achievements are impressive. Nevertheless, the payoff must wait for the future. Lorillard is at present riding the crest of Kent's popularity. And many observers have suggested unkindly that Kent was the happy victim of a lucky accident.

The facts do not back this up. The Kent story, the most dramatic in recent tobacco industry annals, is a blend of Gruber's enterprise, the Reader's Digest's crusading spirit, and a coincidence in timing that has caused many skeptical industry eyebrows to rise—a coincidence that had the new filter Kent in national distribution and an

advertising campaign poised and waiting just as the Reader's Digest issue hit the stands.

- **Proud Father**—Kent was Gruber's brainchild. Six years ago, he noticed a growing health consciousness among smokers, even before the wide publicity given to a possible link between smoking and lung cancer. A 1951 trip to Europe, where filter tips were popular, convinced him that a potential market for filter tips existed in this country that was not being filled by the few then sold.

Kent, named after Herbert A. Kent, former Lorillard president and board chairman, appeared in March, 1952, the king-size version two years later.

- **Up and Down Again**—After some early difficulty with the filter, which strained out flavor as well as tar and nicotine, Kent settled down to modest sales: 3-billion units in 1953, 4-billion the next year. In spite of this limited market, Kent's premium price made it a highly profitable item.

Then other cigarette makers began to respond to the growing trend to filter tips. Kent fell afoul of lower-priced brands. In 1955, the year Brown & Williamson's Viceroy and R. J. Reynolds' Winston led the filter pack, Kent sales were down to an estimated 2.3-billion units. When Gruber took over in 1956, Kent was running 11% behind 1955 figures (and Winston was the leading filter, with 30-billion units).

- **Gamble**—Gruber had wanted to cut the price long before his elevation to the top spot gave the chance to do it. His action, however, was a gamble, since he estimated that volume would have to triple to compensate for the lower price. But the alternative, he felt, was Kent's complete disappearance.

By the end of last year, he knew he had won the gamble. Kent sales were 19% over 1955. By the middle of this year Lorillard reached its initial goal of tripling the August, 1956, sales of Kent.

- **Enter Reader's Digest**—In the meantime, Reader's Digest, as part of its long-time concern with cigarette developments, was investigating filters. In April of this year, the magazine learned through confidential channels about Lorillard's new Kent filter, though earlier Gruber, for competitive reasons, had denied any plans to market a new filter.

The Digest confronted Gruber with its evidence. Gruber was disturbed at the prospect of having his filter unveiled before he was ready to move into national distribution. Not only would he lose competitive advantage, but the value of millions of dollars worth of

old Kent inventories would be seriously imperiled.

His mind was set at rest by two assurances: (1) The Digest never publishes information on consumers products unless they are available nationally; (2) the articles were being planned for this past summer, at a time when Gruber, too, would be ready.

Gruber then agreed to provide the Digest with production-line Kents for testing.

• **Psychological Moment**—Commenting on the fortunate coincidence in timing, Gruber insists he first knew what the series of articles was about only when the first installment appeared in June, dealing with filter tips in general. At that time, he says, he assumed that the next article would deal with test results of the new Kent filter, and he knew from Lorillard's own tests what those results would be. By then, he says, the new Kent had been moving into distribution for two months, and the advertising campaign was being worked out.

In any event, the new Kent filter was announced July 9, ads began appearing by July 14, and the Reader's Digest moved onto newsstands 10 days later.

• **Mutual Support**—Gruber makes no attempt to minimize the benefits of the Digest article. It had "a tremendous effect," he admits. He adds, though, that Lorillard profited from the article only because it did in fact develop the filter and put it on the market.

"The article's chief benefit," he says, "was to corroborate advertising claims we were making." A Digest source adds that Lorillard in turn helped the magazine by furnishing evidence to support its contention that an improved filter was possible and salable.

III. Will It Stay Up?

Lorillard's present reliance on Kent is causing many observers inside and outside the tobacco industry to ask these questions: Is Kent a flash in the pan? Can Lorillard continue to move ahead?

• **Skeptics**—Some skeptics point to the pattern in the tobacco industry. This has always been for the smaller companies to come up with the product innovations. (Lorillard stands on a middle level, far below the giant American Tobacco Co., R. J. Reynolds Tobacco Co., and Liggett & Myers Tobacco Co., but above specialty companies such as Riggio Tobacco Corp., or Larius & Bro., Inc.) The innovating companies often gain a temporary sales advantage.

But if the market swells, the big companies move in with their new products, their heavy promotional artillery.

Both king-size and filter-tips, for example, were introduced by small com-



TESTING—Lorillard's Pres. Gruber assays tobacco crop with Exec. V.-P. Irvin Peak.

panies. But last year American Tobacco's Pall Mall and Reynolds' Winston dominated these markets. Viceroy, made by medium-sized Brown & Williamson Tobacco Corp., lost first place in filters to Winston last year, and according to trade estimates is running third behind L&M as well this year.

• **Reliance**—Past experience indicates Lorillard can expect to face massive competition. Gruber argues that Kent made the country filter-conscious, and lost ground only because the public, faced with lower-priced brands, thought one filter was as good as another. He is betting that the consumer is now more sophisticated about filters, and that Lorillard can help him to become even more so.

• **Competitive Entries?**—But persistent reports in the trade have it that several other companies will be on the market with "improved" filters within a matter of months. American Tobacco's Pres. Paul Hahn has stated that his company is working on a "completely new filter." One report is that this will grace Hit Parade, a late-comer that has not performed as well as the substantial investments poured into its promotion demand. First-half 1957 estimates put Hit Parade sales at about 2.3-billion units.

What will happen to Lorillard as the filter free-for-all becomes rougher is anybody's guess.

• **Hints of Things to Come**—Crystal-ball gazing is more uncertain in the tobacco industry than in some other fields, partly because companies are close-mouthed about their plans. Gruber is emphatic that Lorillard is not resting on Kent's laurels. He describes the drive to produce the Kent filter as typical of the kind of effort that's going on at Lorillard today—and says that with

Kent well on its way, he has shifted his sights to newer problems.

To this, Lorillard people up and down the line add tantalizing hints of important new developments in the works at their top-secret laboratory.

Here the skeptics put in a word that other companies, too, have their secret laboratories going full blast.

Gruber says only that Lorillard is pushing its cigarette filtration research. But it's obvious, too, that the company is planning some sort of changes to rescue its Old Gold label, with the repackaged filter only the first step. Any guess as to what these plans can accomplish must await a further unveiling.

• **Industry Upheaval**—In general terms, Lorillard's chance to avoid the conventional industry pattern lies, as Gruber agrees, in the great upheaval the industry has been passing through.

The present phase—the sweeping trend to filter tip cigarettes—Gruber calls "the third revolution." (The first was the introduction of domestic blended cigarettes in 1913, the second the growth of king-size brands just after World War II.)

Filters accounted for only about 8/10 of 1% of all cigarette sales in 1951: their upward push began about 1953. This year they are running 34% in the first half, and may pass 40%. Gruber accurately forecast the strength of the filter trend in a 1954 speech at the Boston Conference on Distribution. Today, the situation is more difficult, but he believes filters will climb to half of all sales before leveling off.

• **Newcomer's Chance**—This tremendous upsurge has produced great changes in the industry: proliferation of brands, types, and packages, price differentials, and the overcrowding of wholesalers and retailers with increased distribution costs.

For tobacco companies, however, the most significant effect has been the loosening of brand loyalties. Typically, smokers have stuck with one brand for years. Now they are switching around, mostly to new filter brands. This is especially important today, when fewer new smokers are coming into the market because of the Depression sag in the birth rate two decades ago. That means companies have to rely even more heavily for sales gains on luring the consumer away from competitive products to their own brand.

In this present period of flux, decade-old brand positions are shifting. If Lorillard can succeed in holding the consumers Kent is now winning and in stabilizing their loyalty to Kent, it will have a firm foundation to build on.

Gruber refrains from blowing trumpet blasts about the future. He says quietly, "We are satisfied with the progress we have made." His aim is to make the future reflect similar progress. **END**

Put wings on her fingers and money in the bank...



With the incredible new ROYAL ELECTRIC!

In every important category of measurement; speed, ease, quality of typing and servicing costs — the new Royal will outperform any electric typewriter made.

And why not! It's made by the people with the most typewriter *know-how*. Every feature of this truly incredible machine was designed with a purpose . . . to help your secretary produce *more* and better work with *less* effort.

And you can interpret Royal's superiority in terms of dollars and cents, *money in the bank*, because of time and energy it saves.

What's more, this new Royal Electric is a won-

derful morale builder. Its streamlined beauty fits comfortably into any surroundings.

Why not try out a Royal Electric in your own office. Your Royal man will be happy to arrange a demonstration and free trial. Call him today.

Only Royal offers "Twin-Pak,"
the instant changing ribbon that hands never touch!

ROYAL[®] *electric*

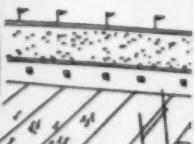
Product of Royal McBee Corporation,
world's largest manufacturer of typewriters

WHAT'S THIS GOT TO DO WITH CUSTOMER RELATIONS?

Shaw-Barton's Sport-Pak—a reversible blanket kit that may be worn as a stadium wind-breaker—helps you build preference with important customers. Perfect for observing company anniversaries or re-emphasizing your appreciation this Christmas.

The Sport-Pak goes home with your customer...travels too! Again and again "You're There".

Write us for Portfolio of Plans...or call your Shaw-Barton representative.



"You're there" with...

SHAW-BARTON
Calendar and Specialty Advertising

SALES OFFICES IN PRINCIPAL CITIES
GENERAL OFFICES AND PLANT, COSHOTON, OHIO

weigh the
modern way!
cut your costs!

use a

HYDROSCALE

ON YOUR
CRANE HOOK

ALL WEIGHING IS DONE
ON YOUR CRANE HOOK
OUTMODES COSTLY CENTRAL
WEIGHING STATION
COMPLETE LINE OF 110
MODELS NOW AVAILABLE

TYPICAL WEIGHING APPLICATIONS

Just a few of the many applications include—loading, unloading, batching, check weighing, foundry charging, production control, process control, checking inventory, and, protecting your equipment from overloading.



SAVE
MONEY!
SAVE TIME!

HYDROSCALES guaranteed—

to be free of defects in workmanship and materials, and accurate to $\frac{1}{2}$ of 1% of the maximum dial capacity.

Write for descriptive literature explaining model features.

HYDROWAY SCALES, INC.

31312 Stephenson Hwy. • Royal Oak, Mich.
"The world's largest producer of crane scales"

In Marketing

GE Revises Advertising Allowances For Distributors of Housewares, Radios

General Electric Co. told its distributors last week that on Jan. 1, 1958, it would start figuring advertising allowances on electric housewares and radios on a new basis.

The company will pay 1.5% of the Housewares & Radio Receiver Div.'s total net billings to its distributors for each line shipped during the past month (or whatever the billing period is).

Right now, GE grants a 2% allowance. But it ties up that 2% in a big ball of string. To get it, a distributor must put in a special claim for it—after he has spent the money. He must submit proof that he spent the money on advertising, and he must prove that he himself has contributed one-third of his GE promotional outlays to GE's two-thirds.

The new plan shears off all strings. This means that the distributor may pocket the 1.5% if he wants, treat it as an increase in his margin. Some distributors are still rankling over the "realistic" pricing that GE set up two years ago, which cut not only the prices on its small appliances but the dealer and distributor margins as well (BW-Dec. 31 '55, p21).

GE admits that such a result is in the cards. But the GE franchise calls strongly for distributor support of the GE lines; the company figures it would be a hardy distributor who would stop promoting the line altogether. The paperwork required by the present plan costs distributors so much, GE says, that the new rate represents a gain to them.

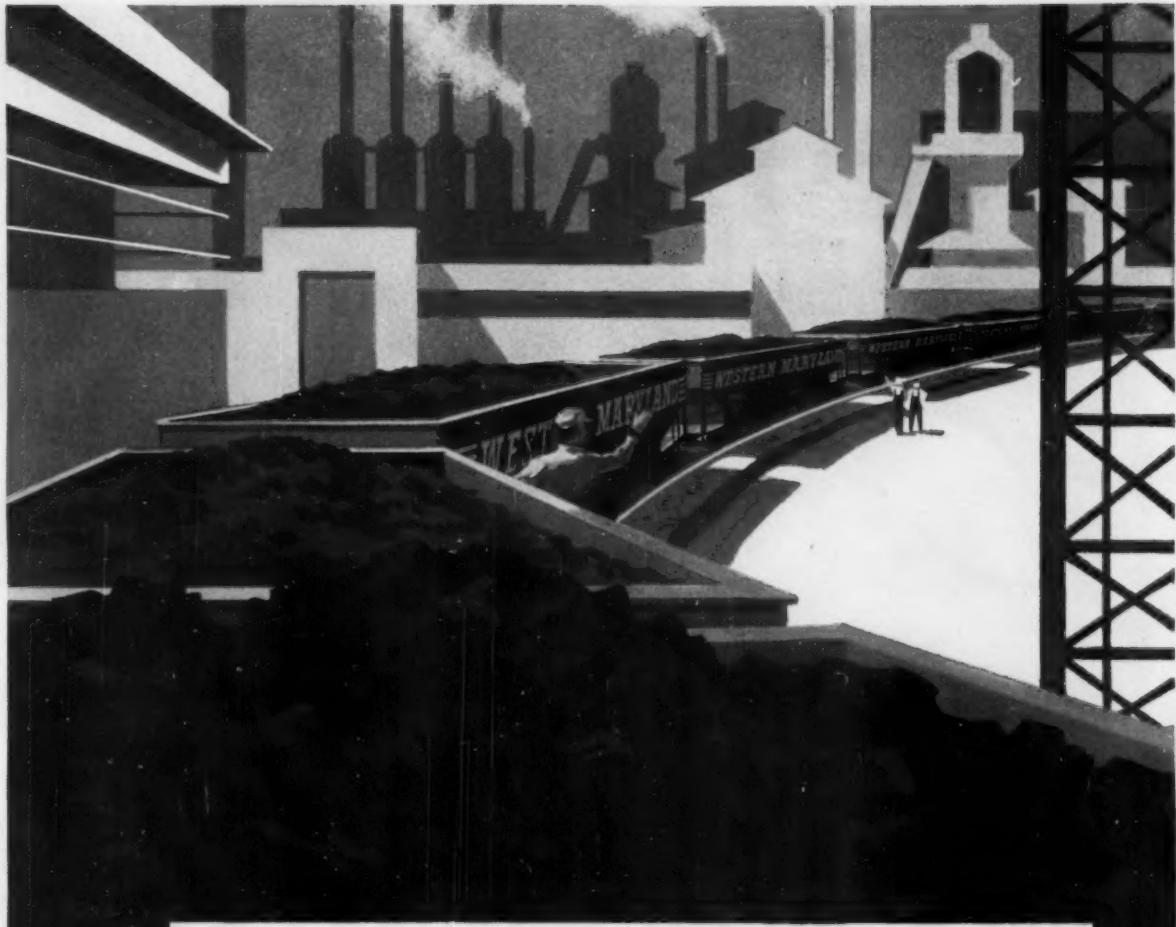
Housewares have shared with other appliances the disappointing performance so far this year. Electrical Merchandising, a McGraw-Hill publication, estimates that shipments for the first seven months were running 15% behind last year's. Its November issue, out this week, foresees that by yearend these lines will wind up maybe 5% behind 1956.

FTC Examiner Rules Against Manufacturers in Radio Ad Case

Last week an FTC examiner ruled that by participating in three advertising plans developed by CBS Radio, NBC Radio Network, and ABC Radio Network, six manufacturers had violated the Robinson-Patman Act provision that specifies promotional allowances must be offered to all customers on a proportionately equal basis.

The radio network case had an unusual twist: Under the plans, the networks offered free advertising time to supermarket chains in return for which the chains agreed to feature in-store promotions of certain manufacturers' products. The network would then sell the time to those manufacturers using the store promotion as an inducement.

Manufacturers—including Groveton Paper Co., General Foods Corp., Sunshine Biscuits, Inc., Piel Bros., Hudson Pulp & Paper Corp., and P. Lorillard Co.—argued that they bought the time for their own purposes. FTC Examiner Abner Lipscomb ruled, however, that the plans constituted discriminatory promotional allowances by manufacturers to their supermarket customers. The case now goes to the full commission.



Basic U.S. Industries are built on these black cargoes

Mile after mile of cars loaded with coal roll over the rails of the Western Maryland. They're headed for key industrial plants that turn out steel, and electric power.

Our civilization is built on productiveness. Built on steel. On power. On coal.

Coal smelts iron from ore. Coal converts iron into steel. Coal generates power... and so endows our steel

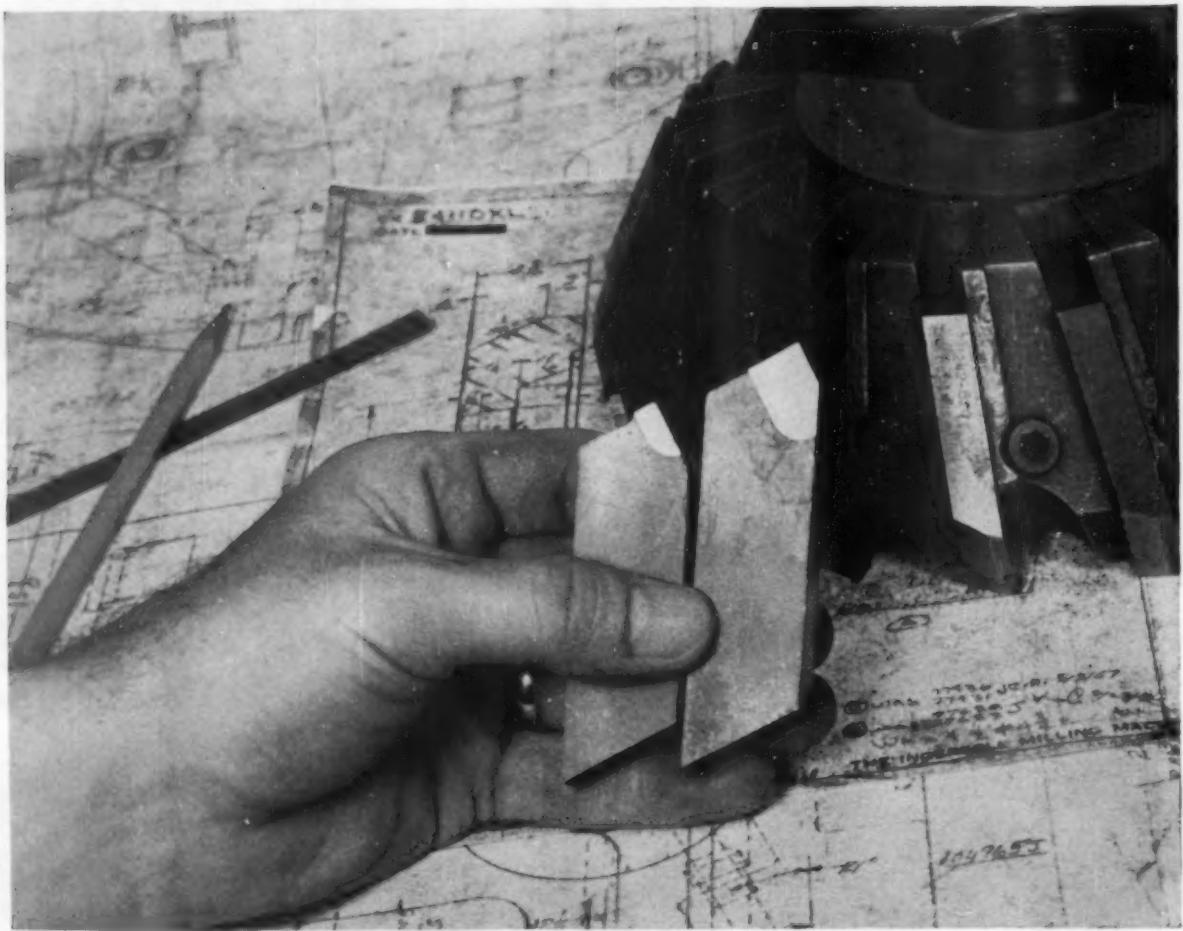
machines with life and movement.

Coal has always been an important source of the Western Maryland's tonnage, and earnings.

So, too, are mounting tonnages of other commodities carried by this busy, thriving road—ore, limestone, cement, forest products, machinery, foodstuffs and many hundreds of other products serving the industries and people of our country.

WESTERN MARYLAND RAILWAY St. Paul Place, Baltimore 2, Md.

Short Cut for Fast Freight



Ingersoll Cone-Type Face Mill for general purpose milling . . . designed for low replacement blade cost.

Do You Get Your Money's Worth?

Most of the carbide in the worn blade was used, but this in itself does not mean that it was used effectively. Many factors are involved in developing the lowest milling cutter cost consistent with improved finishes, faster feed rates and longer tool life.

A continuous review of these factors is part of the day-to-day responsibility of your Ingersoll cutter salesman and of the staff of milling experts he represents. This part of our product has proved its value to hundreds of concerns.

We will welcome an opportunity to tell you more about this service. Write:



If you do not have a copy of this book, write us and we will send you one. It describes in detail the complete line of Ingersoll inserted blade milling and boring tools. Ask for Catalog #66BW.

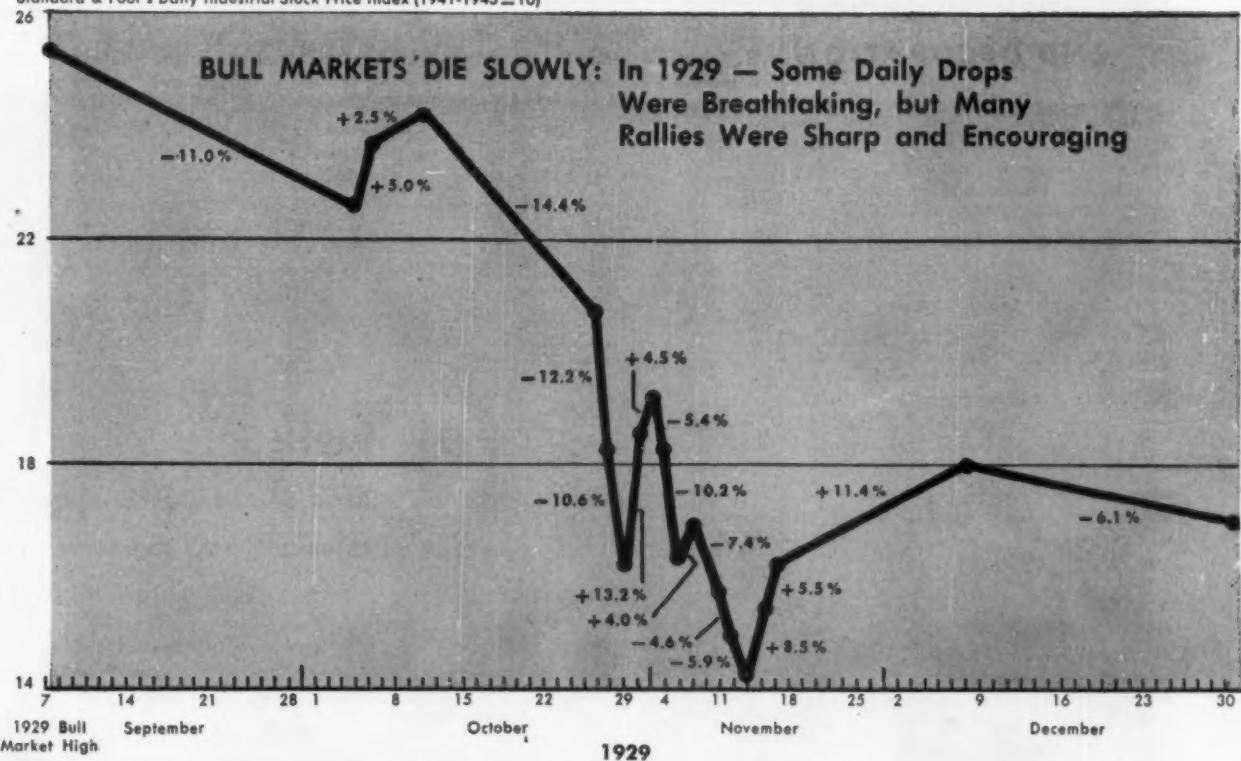
CUTTER DIVISION
THE INGERSOLL MILLING MACHINE COMPANY

505 FULTON AVENUE

ROCKFORD, ILLINOIS

THE MARKETS

Standard & Poor's Daily Industrial Stock Price Index (1941-1943=10)



Second Thoughts on the Rally

Wall Streeters who take the somber view are impressed by the record of previous bear markets, when sharp rallies—even more impressive in percentage gains than last week's—failed to check the general long-run decline of prices.

Wall Streeters beamed last week when the market, after suffering one of its sharpest declines on Monday, bounced back with an even sharper rise on Wednesday. But after the first enthusiasm wore off, Streeters this week began viewing the Oct. 23 "smash" performance with something like distrust.

The rocketing of prices looked impressive, as one man expressed it, only until "some of the boys discovered that the rise was the largest [in number of points] for any single session since November, 1929."

"That comparison," he added, "sent shivers up many a spine."

No Streeter who was active in the market in the last gasping days of the roaring '20s is pleased to be reminded of Nov. 14, 1929—the most recent day

when stocks rose as many points as on Wednesday of last week. For that outburst proved to be only another death throes of a bull market, and no one cares to recall what happened after that.

• **Slow Ebb**—As the chart illustrates history proves that bull markets die slowly—an upsurge followed by a deeper dip, one after another.

After reaching their "official" bull market peak, prices rarely nosedive. Instead, they have a tendency initially to "drift" lower. The downtrend is often interrupted by rallies from time to time, and some are long enough and strong enough to recover a major part of the earlier losses. Yet the bearish influences may prevail in the end. That's why even a spirited rally can be misleading.

• **The 1929 Parallel**—For example, take

the early stages of the 1929 debacle.

In the first 21 days, prices of industrial commons skidded about 11%. In the next five trading days, a rally erased about 60% of this loss. Then the decline resumed. In November, the industrials dipped once to 44% below their September high.

Nonetheless, that November the market started showing recuperative power. It launched a rally that didn't really end until April, 1930. By then, the industrials had recovered 55% of their September-November loss. Enthusiasm had built up as the rally progressed, and more and more people were lulled into thinking the earlier drop had been merely a refreshing pause. They lived to regret having been lured back into buying, for the prices of industrials were destined to drop, with interruptions by further technical rallies, to a level 86% below their 1929 peak.

• **The 1937-38 Parallel**—For a more recent example of the same general pattern, you need only look at the performance of the industrial group in the short-lived but costly 1937-38 bear market.

The 1933-37 bull market hit its high early in March, 1937. By mid-June, the



**MARKED IMPROVEMENTS in
IDENTIFICATION
AND DECORATION**

Variety in the shirt business . . . Proving again that there's no single marking method best for every need, a customer of ours uses both labeling and direct marking, and each method is doing a good job. For shirt boxes, he has changed from paper labels to direct imprinting with our 105-10 machines, helping both looks and economy. For washing instructions, style name, etc. on about five million sports shirts a year, however, he has replaced pre-printed or woven labels bought from an outside source with labels printed on our 126C automatic machine. Saves him about \$2.00 per thousand labels, and inventory problems and obsolete labels are things of the past. Goes to show what the right method can do, and how we may be able to help you find it.

Labels printed on our 126C automatic machine. Saves him about \$2.00 per thousand labels, and inventory problems and obsolete labels are things of the past. Goes to show what the right method can do, and how we may be able to help you find it.

A 4000-year-old idea . . . is behind all screen process printing done today, and a brand new Markem machine is no exception. What's different about our idea, however, is the fact that screen printing's peculiar advantages (heavy coverage with fine detail on almost any surface) are now "mechanized" for volume production. The 90S, as we call it, is so new that only a few are "in the field", but we've heard many enthusiastic comments. Those of you who make such things as cosmetic containers, printed circuits, play shoes, instrument dials, plastic bowls, etc. may find the 90S worth looking into.

The familiar "45" . . . Our "45" machines will probably never enjoy quite the same fame as Mr. Colt's, but they are going great guns. Five years ago this spring we built the first one, and just now serial no. 1100 has been shipped. Nine different models presently comprise the 45 series, and their field stretches from boxes, bags and die cut labels to resistors, condensers and transistors; plumbing fixtures and lollipop sticks to ignition parts and plastic novelties. Markem "45's" can't mark everything (we make about 40 other basic types of machines), but they do illustrate the many jobs a well-designed standard machine can do.

Markem has devoted 46 years to developing marking machines, elements and compounds—and the best ways to use them. If experience like this can help you, call Markem Machine Co., Keene 33, New Hampshire.

MARKEM

industrials were 18% below that high. Then they rallied for two months before their recuperative powers faded. The rally brought back 68% of the earlier losses from the bull market high. Then, of course, came the deluge. Not until Mar. 31, 1938, did prices stop falling. By then, the industrial group was 54% below its 1937 high.

Perspective—None of this, of course, entirely dismisses last week's Wednesday zoom. But Wall Streeters are trying to consider it in its proper perspective. They doubt, in their experience, that today's stock market is an altogether different creature than in the past.

Thus far, smart Streeters have taken the Oct. 23 performance for what it probably was: a sharp technical rally following the development of a market that had finally been oversold. In short,

as many view it, it was a normal happening in a bear market.

Moreover, those who have taken the trouble to dig into the archives have come to believe that the one-day rise wasn't quite so momentous as it was first cracked up to be. In number of points gained in the industrial index, it clearly ranked well up with 1929's one-day technical rallies. Equally clearly, though, the index is now much higher than it was in 1929. Thus, on a percentage basis, the rally loses much of its early glamor.

The rise amounted to only 4.8%, whereas similar upswings in October, 1929, produced gains of 5% and 13.2% and November, 1929, gains of 8.5% and 5.5%. Even October, 1931, when the bear market was in full bloom, produced an 11.1% upswing—for one day.

Wall Street Talks . . .

... about losses by indexes . . . confidence shown in investment trusts . . . yields of common stocks compared with bonds . . . what caused distress selling . . . chill on growth stocks.

"The moving finger writes . . ." At last week's low, Standard & Poor's Industrial stock index had lost 37% of its maximum price gain in the September, 1953-July, 1957, bull market. The rail yardstick had lost 83%, and the utility index, 44%.

Investment trust portfolios show what has been happening to prices lately. Asset values in several funds have dropped 20% or more since mid-July.

But fund managements and shareholders are still buying as usual. In the Oct. 1-22 period, when common stock prices slid 8%, the 46 open-end funds that account for 79% of the trade's assets bought \$61.5-million worth of common stocks and sold only \$22.1-million worth. In the same period, the group's sales of new shares came to \$46.8-million, while stockholders redeemed only \$15.9-million worth of shares purchased earlier.

Blue-chip industrial common stocks again yield more than "seasoned" high-grade bonds. According to S&P indexes, they offer 4.45%, compared with 4.14% for the bonds. In mid-July, when stocks started to slide, they yielded only 3.68% to 3.81% for the bonds.

But common stock yields don't yet match the return available on new top-grade bonds. This week, \$250-million of new 26-year 5% AT&T debentures were offered publicly on a 4.90% yield basis. Mother Bell's cost was 4.94%,

its highest borrowing rate since it sold \$150-million in long-term bonds at a 5.22% cost in January, 1930.

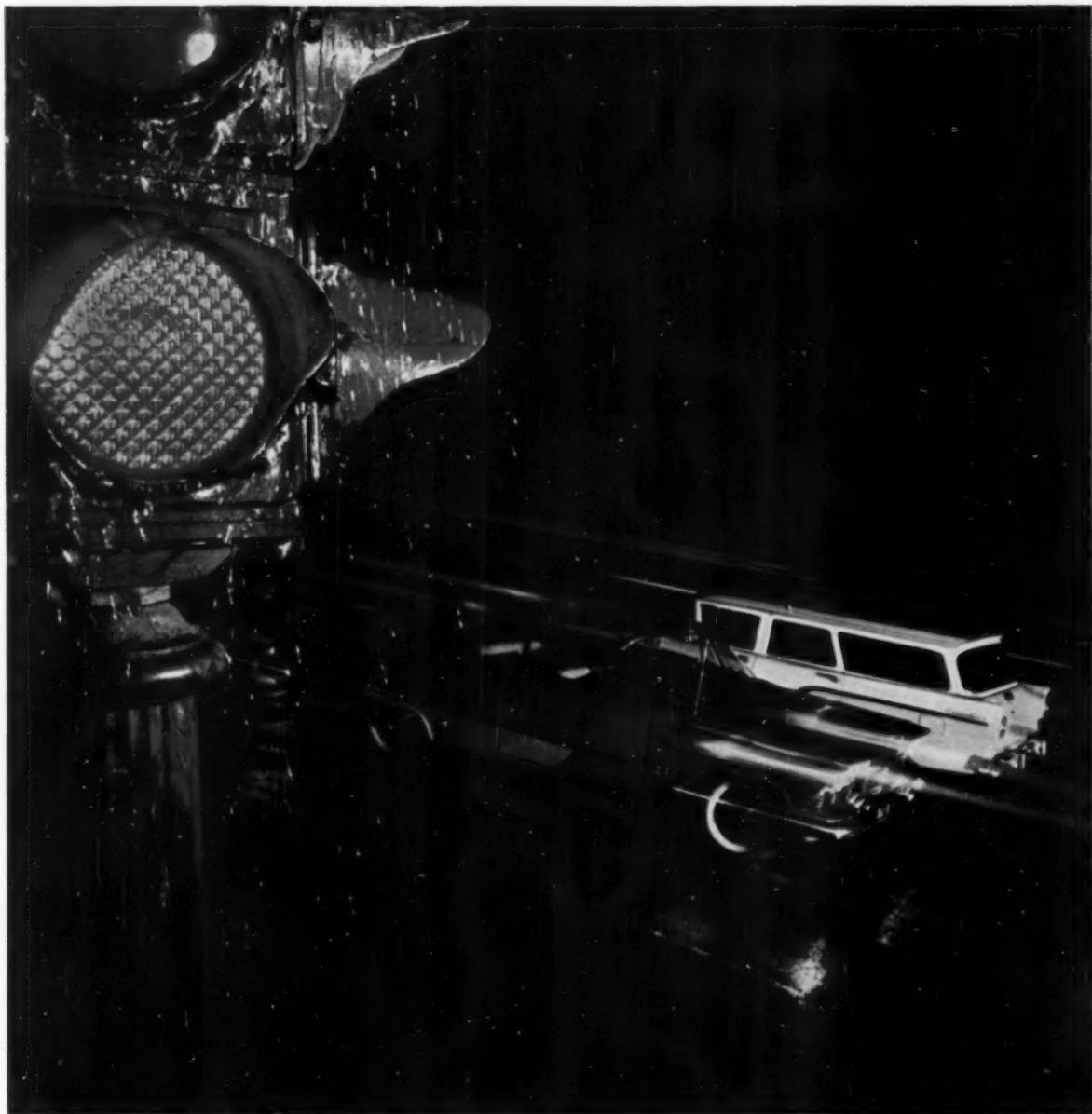
"Distress selling" has finally dried up. Big Board houses deny they were responsible for much "forced" liquidation. With margin accounts on a 70% cash basis, they say, their calls for more margin money were few and were generally answered. Much of the liquidation pressure came, they say, from local and out-of-town banks that were protecting themselves in under-margined security loans of clients. Even more came from abroad—particularly Switzerland—where margin requirements are far more liberal than here.

Growth stocks have lost face with many investors, and not only because their market showing has been poorer than average. With the gloss off them, more and more investors have reportedly been taking a keener look at their recent earnings trends and have been chilled by what they have found.

The difference of opinion that makes stock markets: Now that the market has had its sell-off and its adjustment, boardroom bulls expect prices to range for a time between their present level and 5% or even 10% higher. Their bearish conferees, however, expect the trading range to be from present level to as much as 10% lower, due to continued tax-selling and a growing awareness of the extent of the business let-down that may be coming.

tomorrow's products today...through **ENJAY PETROCHEMICALS**

Stall-free gasolines for all-weather driving



Cool, moist fall weather often means stalling. Gasoline vapor refrigerates the carburetor, turns moisture in the air to ice. Today the best gasolines contain a special ingredient—a basic raw material supplied by the Enjay Company—that protects against this kind of stalling. In gasolines, as in other fields, Enjay petrochemicals help make possible tomorrow's products . . . today! Eight conveniently located offices stand ready to help you.



ENJAY COMPANY, INC., 15 West 51st St., New York 19, N.Y.

Other Offices: Akron • Boston • Chicago • Detroit • Los Angeles • New Orleans • Tulsa



*Pioneer in
Petrochemicals*



Cooling Santa Fe in Chicago with BullDog Power

It takes power to air-condition a skyscraper. From sub-basement to the 15th floor, BullDog aluminum bus duct riser was installed in The Railway Exchange, executive headquarters for the Santa Fe Railway in Chicago. Light weight and easy to handle, Lo-X® aluminum bus duct saved both time and installation costs . . . took Super Electric Construction Co. just two weeks to install. The neat, flexible installation assured plenty of power to cool the entire building.

Consult your BullDog field engineer now about the advantages of Lo-X and the many other BullDog electrical products. He will be happy to analyze your electrical needs—show how an integrated BullDog distribution system pays off in efficiency, safety, economy. Backing him up are the combined talents and products of the country's outstanding electrical company—I-T-E Circuit Breaker Co., and its divisions and subsidiaries—R & IE, Chase-Shawmut, Kelman, Victor Insulator and BullDog.

© BEPCO

BullDog Electric Products Co., Detroit 32, Mich. • A Division of I-T-E Circuit Breaker Co. • Export Division: 13 East 40th St., New York 16, N.Y. • In Canada: BullDog Electric Products Co. (Canada), Ltd., 80 Clayton Rd., Toronto 15, Ont.



IF IT'S NEW... IF IT'S DIFFERENT... IF IT'S BETTER... IT'S

BULLDOG

ELECTRIC PRODUCTS COMPANY

A DIVISION OF I-T-E CIRCUIT BREAKER COMPANY

PERSONAL BUSINESS

BUSINESS WEEK

NOV. 2, 1957



For the youngsters in your family, you might consider the advantages of study abroad—most likely in Europe. In itself, the experience of life in a foreign country is broadening. And far from home, the young student gains new strength and independence. Foreign study is especially important for young men interested in some phase of international commerce or industry for a career—today, the leading U. S. companies value such experience more highly than ever.

If you've been out of touch with this field in recent years, you'll be surprised to learn how many opportunities are now available. **One warning at the outset: The better schools abroad are heavily enrolled, well in advance.** Now is the time to pave the way for study overseas beginning in 1958.

If you studied abroad yourself in earlier days, you know all about the differences between life on an American campus and what your youngsters will experience in another country. For example, your son or daughter should be well aware of these points of contrast.

- European universities make two basic assumptions: (1) The beginning student has already completed his "general" education, and, in the university, will concentrate on a special field; and (2) he or she can carry on extensive study without too much personal guidance and supervision. Thus, most European schools require of American students at least two years of college work (with good grades) and, often, a bachelor's degree.

- Formal course requirements are flexible; for example, class attendance is voluntary. However, the student must pass term examinations rated stiff by even the strictest American standards. Much of the course work consists of formal class lectures leavened by informal tutorial seminars.

- In most foreign schools, students have to manage daily living without many of the services so common to U. S. campuses—such as dormitories, lunchrooms, and medical checkups. And there are fewer extracurricular activities of the sort normally found at an American college.

- Living accommodations abroad particularly require adjustment, especially after a taste of U. S. college life. Students usually live in private homes, often remote from campus atmosphere. The compensation, of course, is actually living with a foreign family, learning the customs and language first-hand. (Oxford, Cambridge, and a few other British schools are exceptions to this: students and tutors live together in university residences.)

In most cases, tuition fees in European schools are a good deal lower than in the U. S. Although they vary a lot from country to country, you can figure that about \$2,000 will cover one full school year abroad—including tuition, living expenses, and transportation. For short summer courses, the full cost usually comes to \$600 to \$700.

School credits are the big problem. American students should consult faculty advisers at home to work out a plan to have credits from one or two years' study applied to their American degrees. Most schools here will cooperate with a student whose academic record is good.

But a question may arise when an American student takes a degree course abroad (usually three to five years) and then seeks admission to a U. S. professional school. Sometimes top-level American universities will question the foreign credits; it depends on the standing of the school abroad.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK
NOV. 2, 1957

One of the most popular programs is the "junior year abroad"—in which you spend one year at a foreign university, and credits count toward your American degree (completed in senior year at home). Many of the country's leading schools participate in such a program—for example, Hamilton College (Clinton, N. Y.), Smith College (Northampton, Mass.), and Wayne State University (Detroit). Most other schools will make individual arrangements.

A few U. S. schools even maintain overseas divisions or "centers." For instance, Middlebury College (Middlebury, Vt.) has a Graduate School of French in Paris; Johns Hopkins University has a program for international studies at Bologna, Italy.

To get general information on foreign schools and credits, write to the Institute of International Education, 1 East 67th St., New York 21, N. Y. IIE publishes a valuable guide to the subject, *Handbook on International Study* (\$3).

—•—

Something like one out of every four buyers of 1958 Ford or GM cars is expected to purchase a model with air suspension (a new system that substitutes air cushion springing for metal springing). If you decide in favor of this optional equipment—average cost will be around \$150—be sure to read the car owner's manual carefully. Because air suspension is much more complicated than the standard system, you'll probably want a specially trained mechanic to service it. Here are some problems you may encounter in servicing and repairs:

- The air reservoir tanks should be drained of moisture every 1,000 to 2,000 miles (depending upon the kind of car) or each time the car is lubricated. This regular draining is very important—failure to do so can mean a fouled system and, in some cases, freezing. For example, the Chevrolet needs a half-filled bottle of alcohol in front of the radiator to provide alcohol vapor that keeps it from freezing.
- Air intake filters and the leveling and lift valves should be cleaned and replaced regularly—according to the specifications of the car.
- Before driving the car onto a service station hoist—be sure of adequate clearance. If all the air is out of the system, ground clearance of the running gear can drop to a bare 2 in. (not enough to clear many hoists).
- Towing can be complicated in the same way. If the air is out of the system and the car has dropped—the rear may drag when the front is lifted high enough for towing. In some cases it may even be necessary to take off the front wheels before the car can be towed.
- Before jacking up the car for tire changes, there are several things to remember: First, disengage the leveling action of the air suspension system (in some cars this can be done only by disconnecting the battery). If you don't, the car will try to level itself and the wheel may stay on the ground. Second, don't put the transmission in "park" or reverse or set the brake, but be sure to block the wheels—there's often a tendency for the car to creep back toward the jack and it may even topple off.

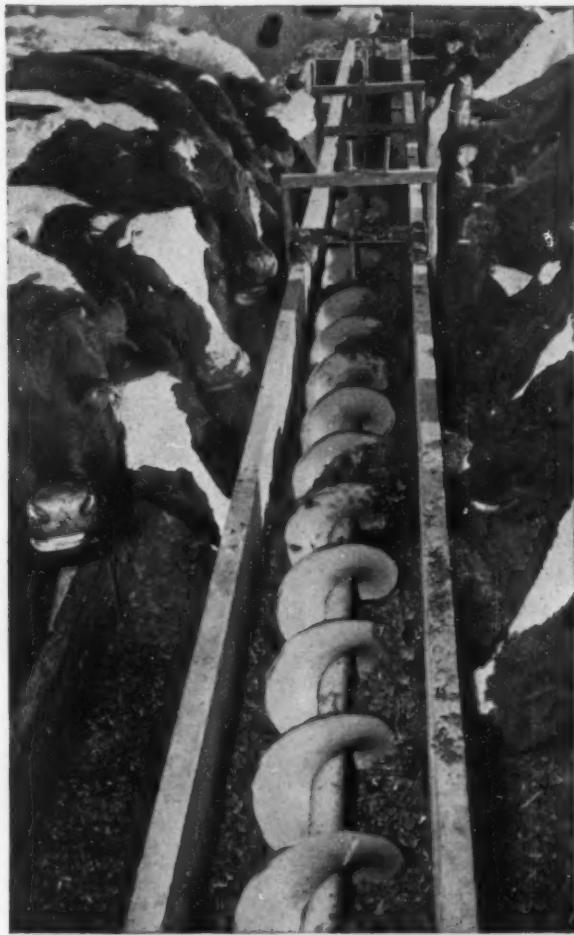
—•—

Vaccine shots: Government health officials are not recommending, at this time, that you take a second Asian flu shot when the vaccine is doubled in strength—after Dec. 1.

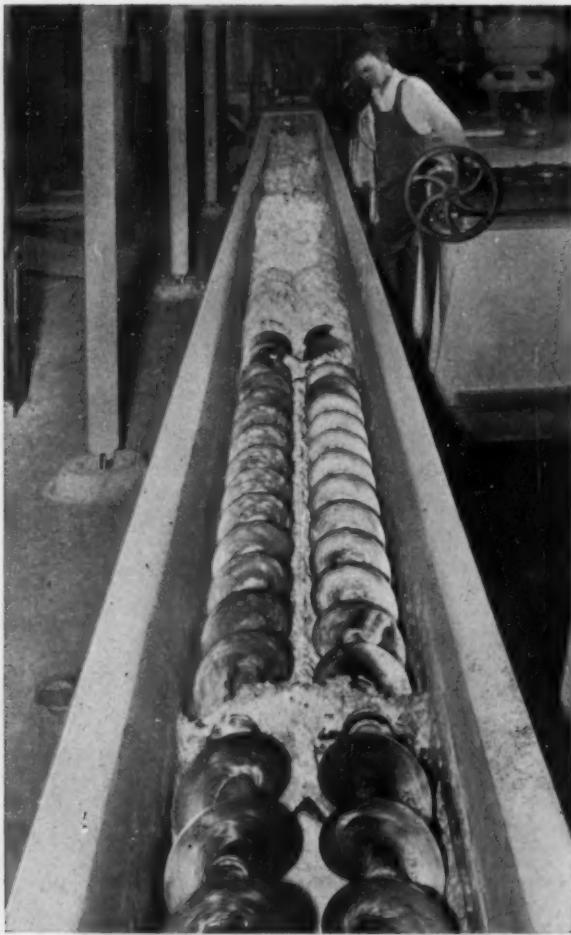
Don't be surprised, when you take your third polio shot, if the doctor recommends that you take a fourth shot a year later. For most people, three are enough, but about 20% need added protection.

Contents copyrighted under the general copyright on the Nov. 2, 1957, issue—Business Week, 330 W. 42nd St., New York, N. Y.

New twists with ancient conveying method



ON THE FARM — pushbutton cattle feeding is one of limitless possibilities for mechanizing chores with Link-Belt augers. From combines to post hole diggers . . . handling feed or harvesting forage—their long wear and minimum of parts practically eliminate maintenance.



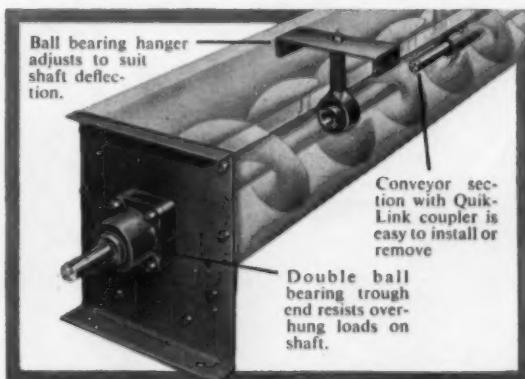
IN THE FACTORY — Link-Belt can furnish a single screw or a complete, coordinated materials handling system built around these conveyors. They handle anything from this wet, gummy pulp to light or heavy, fine or coarse, sluggish or free-flowing material.

Link-Belt introduces new components for screw conveyors to reduce power requirements, simplify maintenance

SIMPLICITY and versatility have promoted wide use of screw conveyors throughout industry . . . on scores of conveying and elevating jobs. And recent Link-Belt refinements more than ever encourage alert industrial designers and manufacturers to work screw conveyors into their equipment or operations. Check the profit and cost-saving possibilities for your firm by writing **LINK-BELT COMPANY**, Dept. AV, Prudential Plaza, Chicago 1, Ill. 12,000



One source . . . one responsibility for materials handling processing and power transmission equipment



THE LATEST FROM LINK-BELT. A new line of components—several incorporating Link-Belt self-aligning ball and roller bearings—reduces friction and maintenance, cuts power requirements significantly. Part of industry's most complete line of screw conveyor products, they're interchangeable on existing systems.



NEW aircraft instrument panel digests flying data from as many as 28 instruments, gives it to the pilot in picture form

on map (between hands) and TV screen, with grid, at eye level. Dials are identifiable by either sight or touch.



BRASS of Navy and Air Force, at Los Angeles unveiling, look at key part of panel—thin TV tube that's transparent from front, but from cockpit depicts basic flying data.

Now Planes

Simplified cockpit panel, newly unveiled product of Navy-Army-industry teamup, promises easier life for dial-wearied pilots, and safer flying for everybody.

Modern aircraft are getting so complicated to handle that they really need a six-armed, Argus-eyed, Univac-brained Mark II version of a human being in the pilot's seat. There's little prospect of such a development, however, and for years pilots have been complaining that there's far too much for one or two men to keep track of in their cramped front offices.

It was only last month that the



OLD pilot's panel, now in use, keeps airman on hectic round of watching, checking, correlating data. Most of the instruments have not changed in 20 years.

Can Break the Instrument Barrier

harassed pilots could see an answer to their plea for help—in the form of the slickest, barest, cleanest instrument panel ever mounted in an airplane (picture, above left).

• **Gadgeteer's Heaven**—To see why, for pilots, it's a development long overdue, you only have to glance at the present-day instrument panel at the right above. And one look at the head end of a commercial airliner is enough to stagger most laymen when they peek through the compartment door at the profusion of lights, levers, cranks, toggle switches, dials, knobs, and pedals a modern pilot has to use to drive his plane.

Fortunately, airmen never have to operate everything at once—but they do come mighty close to it. When you

watch a pilot and co-pilot whiz through a pre-flight checklist as long as your arm, it's easy to see how simple it would be to misread a gauge or two, or set a dial in the wrong position.

What's happened is that the aircraft cockpit has grown so much it has burst its seams. Each type of aircraft has its own arrangement of standard instruments—altimeters, tachometers, manifold pressure gauges, artificial horizons, turn and bank indicators, and more besides. These look essentially the same as they did 20 years ago.

But in the meantime whole sets of new instruments and controls have come along, such as weather radar, navigation and instrument landing aids, a host of engine condition indicators—

many of which have a way of proliferating like armadillos, in groups of four, one for each engine.

Somehow, all of these have been crammed in. A modern airliner's cockpit now needs so much wall and ceiling space for instruments that there's not enough room left for large windows to give the pilot sufficient visibility.

• **Clean-Up**—The setup has been steadily worsening ever since World War II. Plenty of designers have been working their drawing boards overtime in the search for a solution, but it wasn't until the middle of last month that a pilot actually had a chance to fly a plane with a cleaned-up dashboard.

The new, down-to-bare-facts instrument panel is the result of four and a

B&O Piggy Back is long on convenience!

TO 22 STATES

and the District of Columbia

NEW YORK
NEW JERSEY
MARYLAND
DISTRICT OF COLUMBIA
PENNSYLVANIA
WEST VIRGINIA
OHIO
KENTUCKY
INDIANA
ILLINOIS
WISCONSIN
MINNESOTA
IOWA
MISSOURI
ARKANSAS
TEXAS
LOUISIANA
KANSAS
OKLAHOMA
NEBRASKA
COLORADO
WYOMING
MONTANA



• TOFCEE service areas, handling facilities and trailer types constantly meet more shipping needs. For quick dispatch of trailer freight, with prompt arrival and dependable reporting-in-transit, route via B&O TOFCEE Service.



George E. Dove, Manager Railroad Trailer Service
Baltimore 1, Md. Phone LExington 9-0400

BALTIMORE & OHIO RAILROAD
Constantly doing things — better!



TRYOUT—Comm. George Hoover, project officer who guided new panel program, tries it out; Rear Adm. Rawson Bennett looks on.

half year's work—started by the Navy and later joined in by the Army Signal Corps and a slew of commercial contractors. To date, the project has cost about \$54-million—but judging from the reception it's getting from the industry, it's well worth the money and the wait. If its main features are adopted as an industry standard, it could take pilots off the hot seat and make flying safer and simpler for all hands.

• **Story in Pictures**—The new cockpit is far more than a rearrangement of instruments. It does two big jobs of calculating:

• As the present prototype is set up, it integrates the information from 15 standard instruments. Eventually, it will integrate 28 instruments and dispense with dials altogether.

• Instead of presenting a lot of numbers to the pilot—it presents data in two lifelike, pictorial displays—a map at table level in front of him; and, at eye level, a television screen with a grid that shows in simulated form what is directly ahead of his plane. These displays give him in graphic form the information he needs to fly his mission.

The system is based on a very logical concept. It doesn't, for example, tell a pilot how many gallons of gas he has in his tanks—and then make him convert that into range by means of fuel consumption curves, air speed, ground speed, and so on. Instead, the new display simply tells him right away how far he can fly at his present speed and engine setting. And instead of telling him his heading by compass degrees, it puts an arrow on a map of the country beneath, and lets him watch his progress.

• **How It Developed**—Obviously, it's no simple matter to conjure up such an



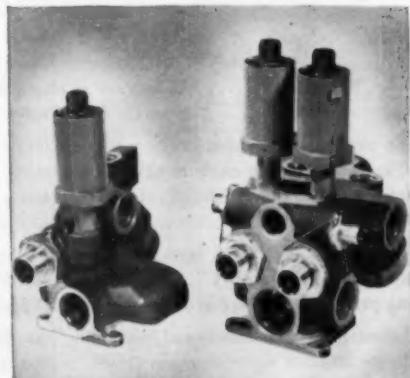
"Fluid thinking" brings the future closer

Design leaders seek the long-range view. From this vantage point, they project their best ideas into the mechanisms of the future.

Example: The Hydraulic Division of Parker Aircraft Co., developed the service center assemblies, pictured at the right. These "power packages" automatically isolate or relieve a malfunctioning pressure source. Compact, efficient design reduces weight 50%, uses 25% less space, improves the plane's performance, and cuts maintenance costs.

Parker specializes in hydraulic and other fluid system components . . . tube and hose fittings, synthetic rubber O-rings and other precise sealing devices, highly engineered valves and related units . . . for aircraft, mobile equipment, metalworking, automotive, chemical, and other industries.

If you're seeking a dependable source for components resulting from "fluid thinking" leadership, call us in. Parker-Hannifin Corporation, Cleveland 12, Ohio, and its subsidiary, Parker Aircraft Co., Los Angeles 45, Cal.



Parker Hannifin
creative leader in fluid systems

Parker-Hannifin operates 9 divisions — with plants in Cleveland, Eaton and St. Marys, Ohio • Des Plaines, Illinois • Berea, Kentucky • Los Angeles, Culver City and Inglewood, California . . . 129 distributors in industrial centers.

BRACON

... SQUEEZE-TO-USE PACKAGING



Delightfully different . . .

To merchandisers of deodorants the package has become as important as the contents . . . a vital factor for future sales.

To expand its position in the market, Lehn & Fink Products Corporation asked us to develop an entirely new container . . . one that contained a roll-on application with the pliability of polyethylene. Here's the result: BRACON squeeze bottles for both "ETIQUET" and "Tussy" deodorants.

These packages have been an *overnight success!* Consumers like their lightness, non-breakability . . . controlled dispensing. Add low cost and appealing printing and you top off an exceptional packaging venture.

Investigate what functional packaging can do for your product. Get full details on BRACON squeeze-to-use tubes, bottles and cans from your Bradley representative . . . located in most major cities.

BRADLEY CONTAINER CORPORATION

A SUBSIDIARY OF AMERICAN CAN COMPANY

Maynard, Mass.—New York, Chicago, Los Angeles, Toronto

easy-to-read yet accurate picture out of the complex interrelationships of speed, power, fuel consumption, wind velocity, and drift. In an airplane, capable of moving in three directions, correlation is fantastically complicated.

The attempt might never have been successful but for two things:

- The Navy decided more than four years ago that things had come to such an awful pass that the best approach was to junk all preconceived ideas of aircraft instrumentation and start fresh. It's the Navy, of course, that has the worst air navigation problems—overwater navigation to and from a moving base requires pinpoint accuracy, and a tired pilot makes too many mistakes.

- The problem was tackled from the standpoint of the system as a whole, rather than on the basis of the separate instruments. Rear Adm. Luis DeFlorez, now retired—who flew in a Wright seaplane in 1912 and is still an active jet and helicopter pilot—explains the advantage. In the past, he says, it was difficult to combine instruments because each was made by a different company. All you could do was to improve each one separately.

Rear Adm. Rawson Bennett, chief of naval research, adds that the program was not confined to any one airplane. And, he says, it had from the beginning the cooperation and planning aid of prime contractors and subcontractors—a cooperation that led to several breakthroughs.

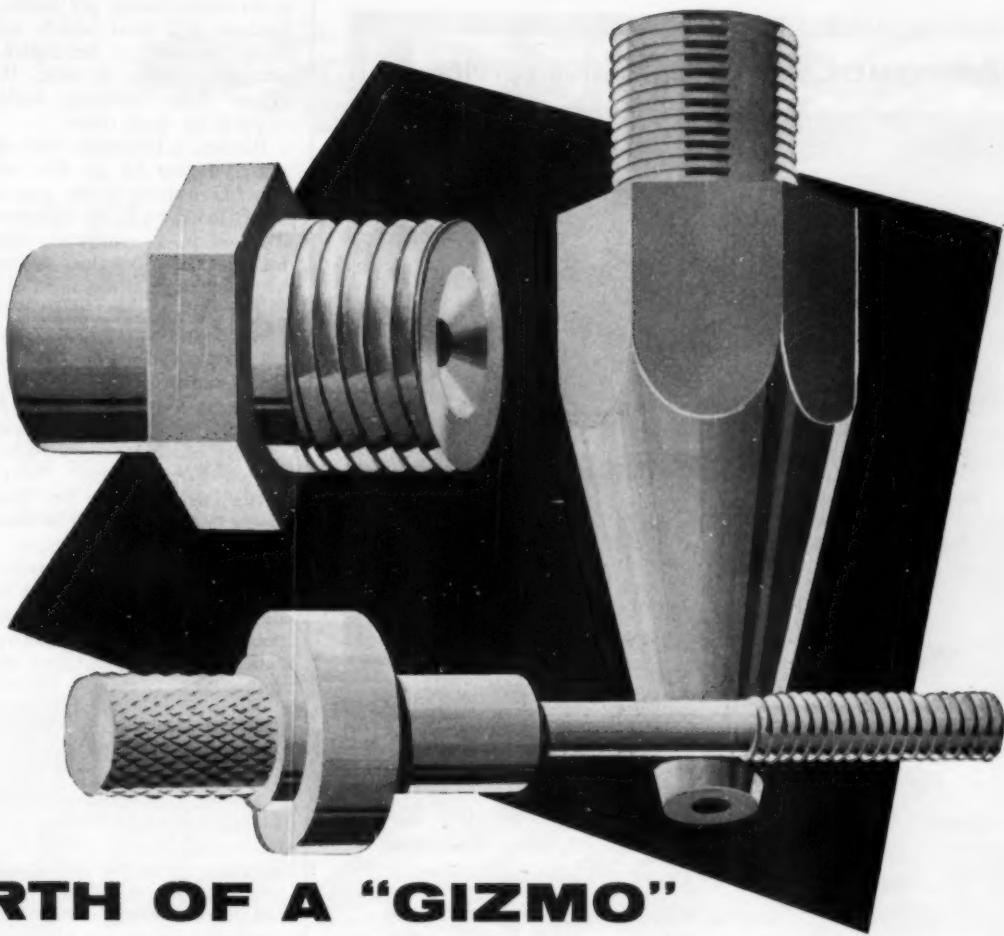
Comm. George W. Hoover, manager of the Weapons Systems-Air Branch of the Office of Naval Research, and project officer for the new panel, is given credit for channeling into the program the efforts of more than 600 companies throughout the U.S.

• **Lion and Lamb**—The work also had the benefit of an inter-service alliance.

The program started in 1953 as a Navy project at the insistence of John Floberg, then Assistant Secretary of the Navy for Air. The Office of Naval Research and the Bureau of Aeronautics set a purposeful, if somewhat overgeneralized, goal. It was: "to develop an integrated system to permit pilots to fly in all weather with a minimum effort, maximum efficiency, reduced training time, and with the least chance of making mistakes."

The job was assigned to Douglas Aircraft Co., of Santa Monica, Calif., as prime contractor.

Two years later the Navy got its unlikely ally: the Army Signal Corps. The Army was beginning to have the same sort of cockpit trouble—but with helicopters. You'd think whirlybirds would be a snap to navigate, since you can go down and read street signs if you have to. But up above the clouds,



BIRTH OF A "GIZMO"

Whatever metal gizmo your client makes, his machines should produce it at maximum profit. "Make do" on old machines won't do! American technology is turning out machine tools which your clients can't afford *not to buy*. How can they buy these new machine tools?

COMBINE MACHINERY FINANCING WITH DEPRECIATION BENEFITS

PAY-AS-YOU-DEPRECIATE PLAN—a modern C.I.T. Corporation financing concept for all new production equipment—gives terms up to ten years. Monthly payments drop annually in relation to the faster depreciation methods. In effect, your clients write off monthly payments as expense. For complete details write or call any office listed below.

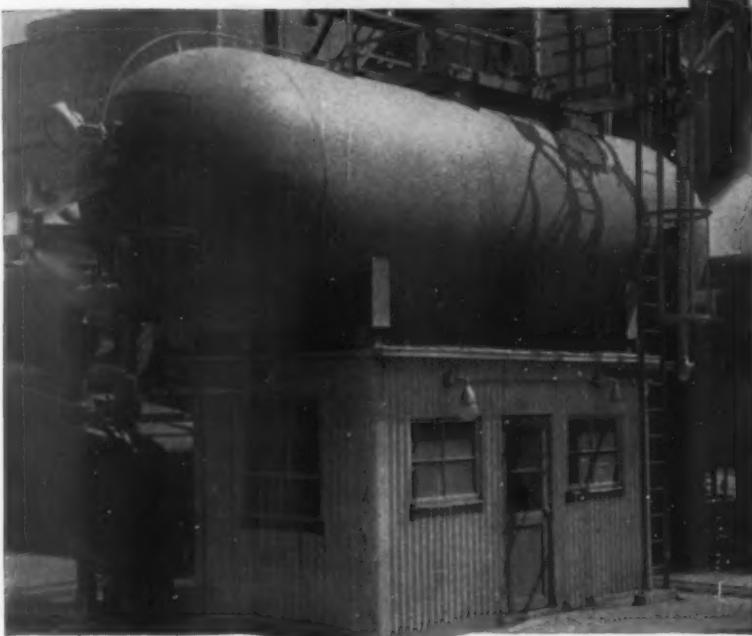
Financing new production machinery on the PAYD Plan or other plans suited to your client's needs is offered by C.I.T. Corporation—a wholly-owned subsidiary of C.I.T. Financial Corporation; capital and surplus over \$230,000,000. In Canada: Canadian Acceptance Corporation Limited.

**Visit Us at the 39th National Metal Exposition and Congress
C.I.T. Booth 1741 in Chicago—Nov. 4-8**



ATLANTA, 55 Marietta St., N.W. • CHICAGO, 221 N. LaSalle St. • CLEVELAND, Leader Building
DALLAS, 1309 Main St. • DETROIT, 1625 Cadillac Tower • HOUSTON, 1100 E. Holcombe Blvd.
JACKSONVILLE, 1710 Prudential Bldg. • KANSAS CITY, 210 West Tenth St. • LOS ANGELES,
416 W. Eighth St. • MEMPHIS, 8 North Third St. • NEW YORK, 390 Fourth Ave. • PHILADELPHIA,
3 Penn Center Plaza • PORTLAND, ORE., Equitable Building • SAN FRANCISCO, 120 Montgomery St.

with **HORTONCLAD®** on corrosive service



PROBLEM—A tank for the manufacture and storage of urea-ammonia fertilizer—a solution of 80% urea solution, anhydrous ammonia and water—at the Grand River Chemical Division of Deere & Company at Pryor, Oklahoma.

SOLUTION—A 9-ft. diameter x 22-ft. long Hortonclad tank with 12 gage 304 stainless steel on $\frac{3}{4}$ -in. carbon steel backing.

Hortonclad is available only in CB&I tanks, pressure vessels and other clad structures. It's a flux-free, high strength, vacuum bonding process producing a clad plate with an integral and continuous bond of exceptionally high strength.

These benefits
with
HORTONCLAD®



★ SPECIAL COMBINATIONS OF METALS

Write our nearest office for details
... ask for the **Hortonclad** bulletin.



C37-2/3R

Chicago Bridge & Iron Company

Atlanta • Birmingham • Boston • Chicago • Cleveland • Detroit • Houston
New Orleans • New York • Philadelphia • Pittsburgh • Salt Lake City
San Francisco • Seattle • South Pasadena • Tulsa
Plants in BIRMINGHAM, CHICAGO, SALT LAKE CITY and GREENVILLE, PA.

or in them, things get hectic, and it's hard to tell even which way you're flying—because a helicopter doesn't necessarily follow its nose. It's just as happy flying sideways, backward, or stopped on dead center.

Besides, a helicopter isn't inherently stable—if you let go the controls, it won't keep flying in the same direction. So it's hard to fly by instruments, and it's hard to do navigation calculations, because the pilot has to keep both hands on the controls most of the time.

The Army went to Bell Helicopter with its problem—and the two projects got tied together in the Army-Navy Instrumentation Program (ANIP). And, as Harvey Gaylord, head of Bell Helicopter Corp., puts it, "Instead of running up blind alleys, we backed off and started from scratch." Many of the devices developed in the program, he says, came as the result of sharing trade secrets.

• **Teamwork**—In the two years since the Army and Navy projects teamed up, they have made sizable progress. The two major contractors, Douglas and Bell, turned up plenty of talent among subcontractors.

Kaiser Aircraft & Electronics Corp. came up with a way to display the data on a flat television screen, using the 23-in.-thick Kaiser-Aiken tube. Allen B. Du Mont Laboratories worked out the so-called contact analog generator—a fancy name for the device that converts the data from the instrument system into a television picture.

Litton Industries, Inc., developed the computer to receive information from the instruments and feed it to Du Mont's picture maker.

• **Progress**—Rear Adm. Bennett points to one other big factor in the success of the program—the fact that the military-industry team laid out all the concepts, methodology, and planning of the "man-machine system" before a piece of hardware was made. Some parts than required basic research. Only enough hardware was made to determine its feasibility.

Prime contractors and subcontractors have met every six months to report progress—and at the recent Los Angeles meeting, they were able to report a number of successful flights using the system.

Results were so conclusive that the Army and Navy turned them over to the civilian aircraft industry at the Los Angeles meeting. M. G. Beard, of American Airlines, Inc., enthusiastically accepted the research data for the Aircraft Cockpit Standardization Committee of the Society of Automotive Engineers.

• **What Now?**—Beard said that further extensive research and refinement, including in-flight evaluation on commercial routes, will undoubtedly be



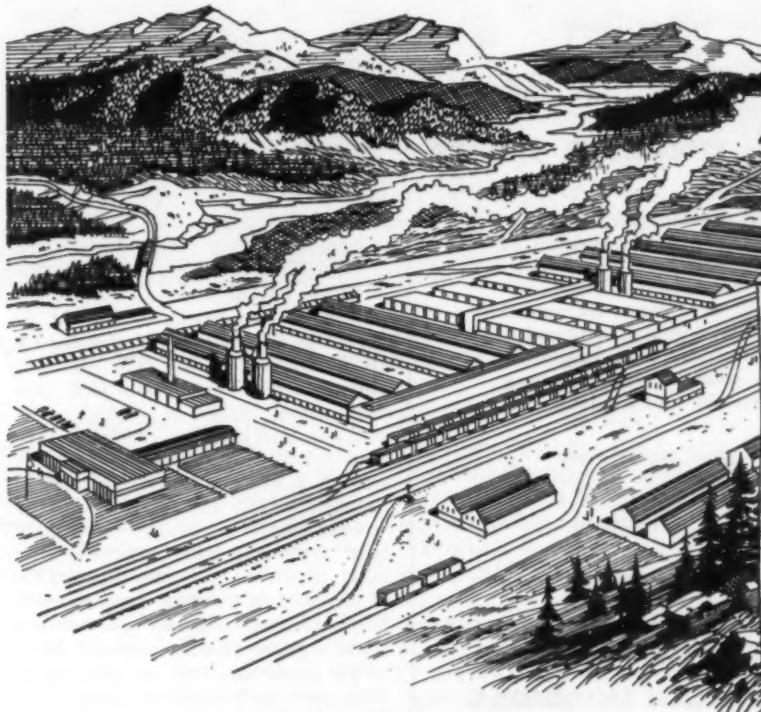
Do you know why?

One-third of all U. S. Aluminum is made along Great Northern's line

Nearly 37% of all aluminum manufactured in this country is made along Great Northern's line across the top of the nation. Why? Well, abundant and economical power is an obvious answer. But power and manufacturing capacity are useless without efficient and dependable transportation.

Aluminum producers know that Great Northern is pre-eminently equipped to move ore into their mills—and to move ingots, sheets or rolled stock out to the market.

For information on Freight services write W. E. Nicholson, General Freight Traffic Manager, Great Northern Railway, St. Paul 1, Minnesota.



Travel Executive-style on GREAT NORTHERN'S incomparable EMPIRE BUILDER

Travel completely carefree. Be sure of on-time arrival. Enjoy the matchless comforts of this fine streamliner between Chicago and Seattle-Portland. Great Dome seats, fine Pullman rooms, luxurious diner. Every day, each way. No extra fare.

*P. G. Holmes, Passenger Traffic Manager
Great Northern Railway, St. Paul 1, Minnesota*
Offices in principal cities of U. S. and Canada



Great Northern Railway offers attractive sites on its trackage—in cities like Superior, Wisconsin; Duluth, Minnesota; Fargo, Grand Forks, Minot and Williston, North Dakota; Great Falls, Montana; Spokane, Wenatchee and Seattle, Washington; Portland, Oregon; Vancouver, B. C.

Your inquiry will be held in strict confidence. Write E. N. Duncan, Director, Industrial and Agricultural Development, Great Northern Railway, St. Paul 1, Minnesota.





an efficient office
can be attractive, too...

MOVABLE *Hauserman* INTERIOR WALLS

When office efficiency seems to come just naturally, chances are that wise long-range planning makes it so. For this handsome office, as an example, Movable HAUSERMAN Interior Walls were selected for at least two important reasons. They can be rearranged quickly and easily so that floor plans can be altered to meet changing requirements. And their bright, attractive appearance helps create a morale-boosting atmosphere in which even routine jobs are done faster and better.

To maintain the pleasing appearance of these HAUSERMAN Walls, all that will ever be required is periodic washing. HAUSERMAN baked enamel, available in a complete selection of colors, is a lifetime finish.

If building or remodeling is on your agenda, now is the time to consult the HAUSERMAN representative. You will find him listed in the Yellow Pages (under PARTITIONS).

MOVABLE HAUSERMAN INTERIORS

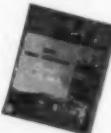
National Lifetime Service... An Exclusive Hauserman Dividend

THE E. F. HAUSERMAN COMPANY
7439 Grant Avenue, Cleveland 5, Ohio
Hauserman of Canada Ltd.
91 Yonge St., Toronto, Ontario

Please send your free booklet, "How Eight
Companies Saved \$595,363", to:

Name _____
Company _____ Title _____
Street _____
City _____ Zone _____ State _____

Free Booklet



needed before airlines can make full use of the system—as was the case with navigational radar. But he believes that once the system is thoroughly checked and proved out, it would require practically zero training time to switch from standard instrument flight to the contact analog system.

On the military side, Edward H. Heinemann, Douglas' chief engineer at El Segundo, says the services hope to get into the pre-production stage with the new system—but will need more money to do it. Heinemann figures the system will be ready for all of the next generation of aircraft.

Aluminum Cans...

... are poaching on tin-plate preserves. Kaiser is latest aluminum supplier to tap the rich can market.

Another aluminum supplier has succeeded in edging into can making. Kaiser Aluminum & Chemical Corp. announced this week that metal food cans, produced by a new type aluminum drawing press, will be used to package at least two products. Kraft Food Div. of National Dairy Products Corp. will use the cans for its line of grated cheeses, and Air Reduction Sales Co. will ship some of its welding electrodes in airtight aluminum containers.

Kaiser has installed a "commercial prototype" can-making facility at its container plant in Wanataugh, Ill. (BW—May 11 '57, p178). The can machine punches out thin-walled cans from round blanks in a single press stroke by pushing them through a series of doughnut-shaped circular dies. The machine's first commercial job will be to produce 5½-million cans for Kraft.

• **Cost Factor**—Kaiser says it can make rigid containers with extremely thin walls (down to five one-thousandths of an inch) at a cost competitive with tin-plated steel. But such thin-walled containers are suitable only for lightweight products, such as spices, powders, and grated cheese, since they are not strong enough to withstand rough treatment when filled with heavy liquid materials. For a stronger can, the drawing machine must use heavier gauge aluminum sheet, which runs the price up.

Kaiser is the second aluminum supplier in recent weeks to tap the rich can market. Reynolds Metals Co. was first in the U.S. with a sizable can contract (BW—Sep. 28 '57, p124). Esso Standard Oil Co. agreed to use aluminum oil cans on the basis that Reynolds would buy the used cans as scrap. **END**



Why only ORE BRIDGES at McLouth's Trenton Mill?

At some steel plants the unloading, stocking and reclaiming of blast furnace materials are divided into separate operations. Two different machines, unloaders and bridges, work together economically to handle large tonnages.

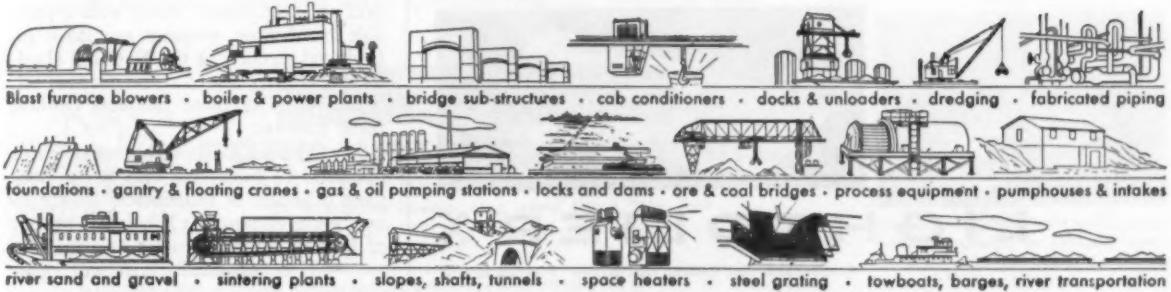
This is not always the case. A plant that has only a few furnaces can realize substantial savings by building a dual-purpose machine to do the entire task. That's what

McLouth did. At their Trenton, Michigan mill these two modern Dravo bridges perform all functions —unloading, stocking and reclaiming ore and limestone.

Practical engineering assistance is available to help you solve problems or reduce costs in bulk materials handling or in any of the fields listed below. Write DRAVO CORPORATION, PITTSBURGH 25, PENNSYLVANIA.

DRAVO

C O R P O R A T I O N



NATIONAL'S

new line of improved counting scales



MODEL 205

Counting Ratios
99-1, 9-1
100-1, 10-1
144-1, 12-1

CAPACITY 150 LBS.

High Speed —
High Ratio
MODEL 205T

ACCURACY GUARANTEED

Vibration control adjustment, handy zero adjustment, target indicator, safety load bumpers, simplicity of design in combination with a high and low ratio, provide a fast, accurate, simple to use and durable scale. Engineered to count uniform pieces of any description. Portable models equipped with lever locks and rubber wheels.



Counting Ratios
99-1, 9-1
100-1, 10-1
144-1, 12-1

MODEL 206



Count three times as much
in one load at one time
on this improved bench-
type counting scale.

Sensitivity of 1/10 ounce retained.

Larger Capacities
Larger Ratio Pans
Larger Platforms

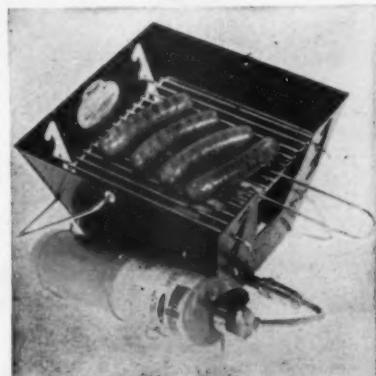
Portable Models also
available.
CAPACITY 1,000 LBS.

Counting Ratios
99-1, 9-1
100-1, 10-1

High Speed —
High Ratio
MODEL 206T



NEW PRODUCTS



PORTABLE "charcoal" grill and 18-lb. refrigerator, both fueled by propane gas.

Fancy Cook-Outs

The acrid odors rising from a plumber's melting pot are a far smell from the succulence of a charcoal broiled steak and cold beer. But for one company, the combination may be heady and profitable perfume.

The portable propane gas grill and portable propane gas refrigerator in the pictures are two of the reasons for optimism at Otto Bernz Co., Inc., Rochester, N. Y. They represent a bold attempt at diversification by the 80-year old company whose primary business has been the manufacture of plumber's high-quality melting pots, handyman's blow torches, and, since 1947, cylinders of propane gas. The grill and refrigerator, along with a portable two-burner propane gas stove introduced recently at the National Hardware Show, are aimed at the outdoor set.

• **Salient**—The three products contain these features:

- The 18-lb. portable refrigerator operates 50 hours on one Bernz propane cylinder, or indefinitely on standard house current. It'll hold 36 bottles of beer or 30 lb. of meat. Cost: \$99.

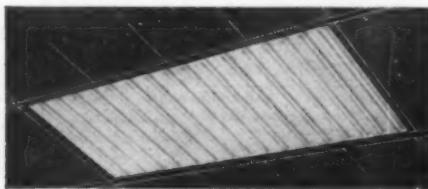
- The "charcoal" grill will oper-

NATIONAL SCALE CO., Dept. B1, SPRINGFIELD, MASS.

An audit of your
lighting needs will
fill the "out" basket



The employee who's there—but not producing—may be the victim of outmoded, inefficient, insufficient lighting. Authorized Lightolier distributors can prepare an audit of your lighting needs, draw a lighting plan and show you the Lightolier units best suited to your needs. Example: Our new Strialux fixture. It fits modular and plaster ceilings, provides well-diffused fluorescent light, adds to the appearance of your establishment. Write LIGHTOLIER, Dept. BWS-2, Jersey City 5, N. J. for free brochure.



LIGHTOLIER

Architectural and Residential Fixtures Portable Lamps



Night mobility and combat power are provided for both men and tanks by infrared devices developed by ERDL.

ENGINEER RESEARCH AND DEVELOPMENT LABORATORIES AT FORT BELVOIR FURTHER SCIENCE OF MOBILITY

Mobility is a byword at the Engineer Research and Development Laboratories, the principal military R & D center of the Corps of Engineers, U. S. Army. Work in seventeen fields of endeavor is aimed at furthering the mobility of our forces, and impeding the movement of the enemy. These fields are: bridging and stream crossing, cover and concealment, construction and maintenance equipment, infrared, liquid fuels distribution, mapping and geodesy, materials, mine warfare and demolitions, buildings, processing and packaging, water supply and sanitation, special weapons and general engineering.

About 1,500 civilians, 50 officers and 200 enlisted men work at the Laboratories. An 800-acre proving ground provides facilities for testing earthmoving, firefighting and illumination equipment, obstacles and demolitions, and mine warfare items. Environmental testing under arctic, desert, and tropical conditions is accomplished by detachments of Fort Churchill, Can-

ada; Yuma, Arizona; and in Panama, respectively. Facilities in Greenland are employed for operational testing of construction and navigation equipment for ice cap requirements. At Prince, West Virginia, there are facilities for bridge testing. A branch at Wright-Patterson Field, Ohio, coordinates ERDL and Air Force aerial photographic activities.

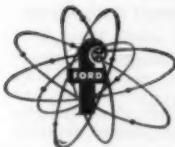
Typical of ERDL's work are target location systems and equipment being created by its Topographic Engineering Department—where means of accurately locating the enemy by use of drones and many other techniques are under constant development. In other departments, vehicular navigational systems, construction equipment capable of being air-dropped, and mobile assault bridges are being developed, and the effects of atomic weapons are being determined. Many hundreds of other projects are under way at ERDL, helping to keep the Army of the United States second to none.

This is one of a series of ads on the technical activities of the Department of Defense.

FORD INSTRUMENT CO.
DIVISION OF SPERRY RAND CORPORATION

31-10 Thomson Avenue, Long Island City 1, New York
Beverly Hills, Cal. • Dayton, Ohio

ENGINEERS of unusual abilities can find a future at FORD INSTRUMENT CO. Write for information.



Technicians at Ford Instrument assembling components for vehicular navigational computers being developed under an ERDL contract.



End up with bigger profits

Payload capacity is just *half* the profit-picture on your hauling jobs. You also need fast, efficient dumping. And that's what you get with Gar Wood - St. Paul dump bodies and hoists. Here are the features that mean big savings at the end of every hauling cycle:

Twin lift arms are anchored together to exert equal lifting force regardless of load distribution. One-sided lift strains are eliminated . . . dumping is smooth and safe, even on steep*grades. Extra high dump-angle means fast clean-out, less jockeying. You get faster cycles with more over-the-road hauling, end up with a lower net cost per payload hour.

Gar Wood - St. Paul offers a matched hoist and body combination to meet your exact payload and chassis requirements. And, each has features that pay off in low-cost dumping. In every way, you'll find that Gar Wood gives you more to bank on!

GAR WOOD INDUSTRIES, INC.

Wayne, Michigan

Plants in Wayne and Ypsilanti, Mich.; Findlay, Ohio; Mattoon, Ill.; Richmond, Calif.



Truck Cranes



Tractor Equipment



Frate-Gates



Load-Packers



Hoists & Bodies



Ditchers

ate up to four hours on a single cylinder of propane. Fat dropping onto the ceramic tile surface of the grill is turned into carbon particles which rise with the heat and stick to the meat, giving it a charcoal flavor. Cost: \$14.95.

• The two-burner stove is for large pots and skillets. Each burner runs on an independent cylinder that lasts up to six hours. Cost: \$24.95.

• **Calculated Risk**—Diversification may seem an unnecessary risk for Bernz, which enjoys a comfortable 80% of the blow torch and melting pot business. Sales rose in the last five years from \$800,000 to \$8-million. The backbone of those sales was cheap (\$1.89) replaceable propane cylinders used as fuel for the shipment. But with new plumbing and paint materials emerging daily from labs, Bernz knew it couldn't continue that pace. Any large increase in cylinder sales would depend on big sales increases in pots and torches. So, Bernz decided to take a crack at outdoor appliances.

By developing appliances that used the same 2-lb. propane cylinders as their heat source, Bernz figured it could meet the unfilled need for portable high-caloric heat appliances and at the same time sell more cylinders.

About half the sales of its torches in the last three years were to do-it-yourself craftsmen, and there is good reason to believe that this group also contains a good proportion of the cook-out crowd.

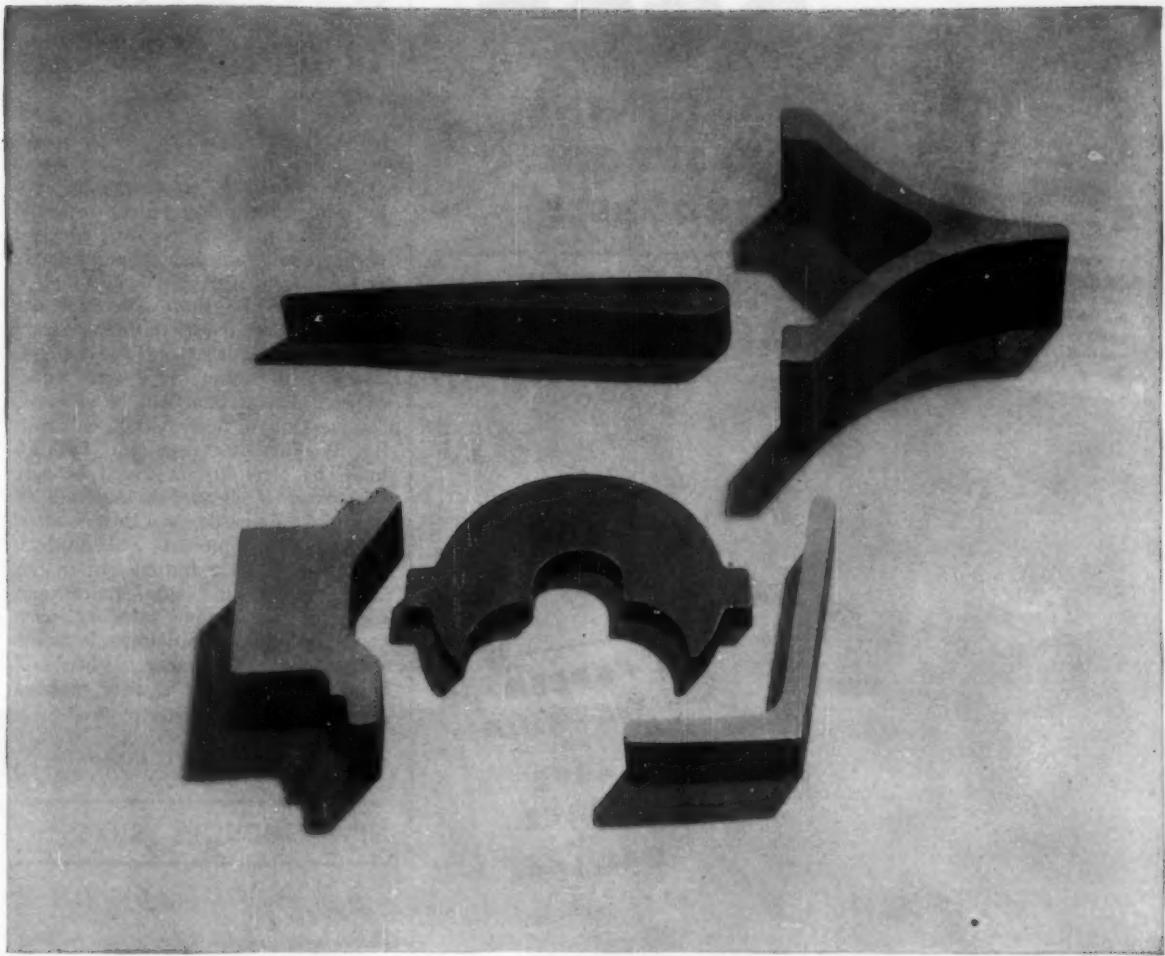
• **On the List**—Other portable heat products scheduled for the near future include a flameless radiant propane heater for drive-in theaters that stay open in the winter.

New Magnetic Steel Made in Lab Quantities

Last August, General Electric Co. announced it had successfully made sheets of silicon iron that could be magnetized easily across both width and length—something that scientists and engineers had been trying to do for over 20 years. Last week, a research group from Westinghouse Electric Corp. and Vacuumschmelze, a division of the German metallurgical combine of Siemens & Halske, made a similar but slightly fuller announcement.

The GE announcement failed to mention how it had turned the trick. But Westinghouse says the research group is using the same techniques and controls that have been used for more than 20 years to magnetize steel sheet in one direction only.

This seems to indicate a practical method of making "cube-oriented silicon steel," so called because steel crys-



Intricate Allegheny Ludlum Steel Extrusions ***cut material needs up to 60%, slash machining costs***



**Write for this
technical book
on A-L Steel Extrusions**

12-pages of design and engineering information on steel extrusions. Process and product explanation, material properties, design tips and limitations, tolerances, order instructions, etc.

Address Dept. W-95

There's no doubt about extruded shapes saving money on materials and on machining. Non-ferrous applications in the last decade have proven it.

Now even greater savings are possible with tough, strong metals in Allegheny Ludlum Hot Steel Extrusions.

Extruded shapes in all stainless grades, tool steels, carbon steels, electrical steels, high temperature alloys . . . even in zirconium, nickel alloys . . . are now in production at Allegheny Ludlum, cutting costs in many different industries.

If you're hogging out sections, paying for special mill rolls on small orders, or

waiting for minimum rolling mill tonnages, Allegheny Ludlum Steel Extrusions are your answer. They will save you scrap loss, slash your machining costs, hold down your inventory requirements and cut delivery time. Charge for die design is low—under \$200. Orders taken for as little as 40 pounds.

To learn more about the time and cost-cutting possibilities of Allegheny Ludlum Hot Steel Extrusions, send for the technical booklet at the left or call any A-L office for technical assistance.

**Allegheny Ludlum Steel Corporation,
Oliver Bldg., Pittsburgh 22, Pa.**

W-9507



ALLEGHENY LUDLUM

for all your special steel needs

Stainless and high-temperature, electrical and tool steels, magnetic materials, and sintered carbide

THE NEW BRADLEY

DUOS

BANISH THIS WASHROOM TROUBLE!

Excerpt from Article in
"Modern Sanitation" Magazine.



New beauty of design, stronger construction, improved firm wall mounting, floor clearance, and wide hinged foot-treadle are featured in the latest model Duo-Washfountain.

As in the previous model, the Duo has no faucets (regular or spring type) and tempered water is supplied at the touch of the foot-treadle via the central sprayhead.

By slipping the hinged foot-treadle, the floor area below is cleared for easy cleaning. By serving two persons, more washing facilities are provided in less space with fewer piping connections. For complete specifications and data, ask for latest Bulletin K-1204.



BRADLEY WASHFOUNTAIN CO.,

2341 West Michigan St.,
Milwaukee 1, Wisconsin.

Write for Bulletin K-1204



BRADLEY
Duo Washfountains

Distributed Through Plumbing Wholesalers

tals can be oriented along the lines of a cube, has been found. This could revolutionize the manufacture of magnetic electrical components, such as transformer cores.

Until now, square cores were made by joining at right angles four pieces of single-oriented sheet to create a magnetic field in all four directions. By using cube-oriented steel, it would be possible to stamp the same core out in one piece. And such common shapes as L's, U's or E's could be made.

• Still in Lab—Both Westinghouse and GE point out that their projects are still in the lab stage, and there is no way of estimating when cube-oriented silicon steel will be available commercially or how much it will cost. But Westinghouse people are optimistic. They feel that it would be easy to convert a standard rolling mill to turn out the new steel by their process.

Using the present .005-in.-thick steel that they are turning out in the labs, they could make transformer cores for missiles and satellites, relay cores, and similar airborne electronic and electrical equipment. When and if cube-oriented steel is made in large quantities, it could mean at least a 20% reduction in size and weight of electric motors and transformers.

NEW PRODUCTS BRIEFS

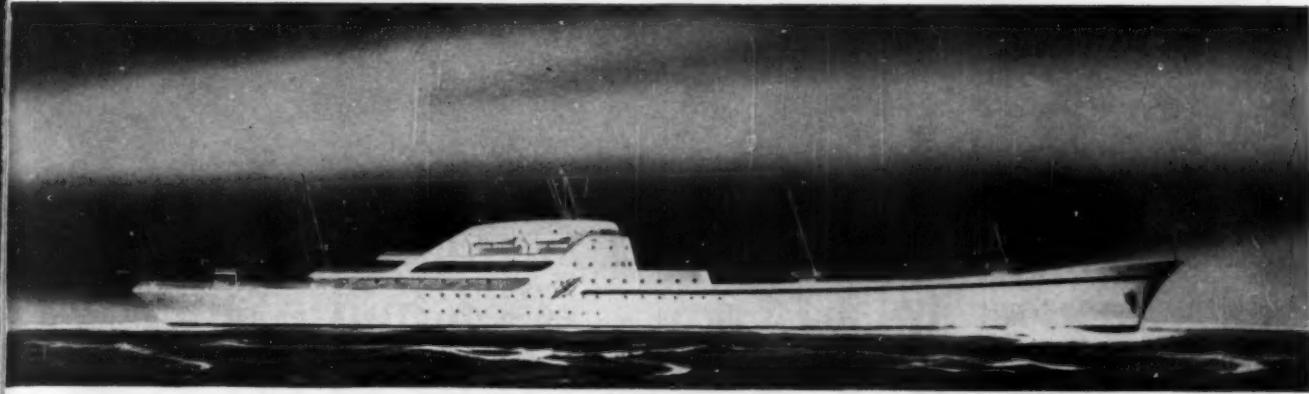
Tubular shields of clear Tenite plastic are made to slip over fluorescent lamps to (1) protect the lamps from breakage and (2) to prevent glass from flying if they should break. Anchor Plastics Co. of Long Island City, N. Y., makes the shields at prices varying according to specifications and quantities ordered.

A paint emulsion combining features of the two most popular paints—alkyd flat and latex enamel—has been developed by American Cyanamid Co. The emulsion is available to all paint manufacturers. It is said to produce paints that are easy to apply, conceal old paint well, can be scrubbed, won't decompose, and can be cleaned off with tap-water when still wet or with turpentine after they have dried.

A magnetic tape recorder and playback unit introduced by Perfect Circle Corp. of Hagerstown, Ind., will record auto operating conditions in road tests and recreate them in the lab. The tape memorizes four variables of engine operation—manifold pressure, rpm., oil pressure, and water temperature. In the playback, the tape then controls the lab test engine, so response to road conditions can be realistically checked.



Leading the Way to a Nuclear-Powered Merchant Fleet



GEORGE G. SHARP, INC.



Scheduled to be ready for sailing by 1960, the first nuclear-powered merchant vessel will help to assess the economic feasibility of nuclear power as a means of propelling merchant ships . . . another big step toward putting the power of the atom to work constructively and economically. Designed to steam for 350,000 miles—about 3½ years—on a single loading of nuclear fuel, the single screw ship will have a capacity of 9,000 to 10,000 deadweight tons of cargo plus 60 passengers.

The Contract To Design, Manufacture and Install the complete pressurized

water reactor propulsion system for this new vessel has been awarded to The Babcock & Wilcox Company. The advanced reactor, being developed at B&W's Atomic Energy Division at Lynchburg, Va. will utilize fuel elements of low uranium-235 enrichment. The complete propulsion system is being designed to develop a maximum of 22,000 shaft-hp.

In Nuclear Power Development, The Babcock & Wilcox Company comprises a single source for power reactors, propulsion reactors, research reactors, fuel elements, reactor components and experimental reactor de-

velopment. The designing and engineering of complete nuclear steam generating plants are supported by B&W's long experience in related fields, helping to apply the most recent developments in engineering knowledge to the solution of your problems. The Babcock & Wilcox Company, 161 East 42nd Street, New York 17, N. Y.

G-865



Obligation or Opportunity?

CHANCES are you have taken care of the obligations, but how about the opportunities life insurance offers in estate and business situations?

Many New England Life agents are specialists in estate conservation, employee compensation and business stabilization planning. And the liberal New England Life contract can mean extra economy, extra flexibility for your plan. Do call on one of our 300 offices to investigate the opportunities.

We will be glad to mail you briefs by our own experts on such subjects as "Trust Funds Get a Break," "A New Compensation Plan for Management Employees," "Life Insurance and Estate Taxes," "Corporate Dollars on the Right Track," if you will write directly to New England Life, Back Bay P. O. Box 333K, Boston 17.

Here's a man's bag with a dual personality



Top grain
cowhide, 18" x 13" x 5"
or 17" x 12" x 4".
At Luggage and
Department stores.

this side - business,
with roomy
filing pockets
to hold books,
important papers,
presentations,
catalogs, etc.

this side - living,
with space for
clothes, toiletries,
etc. concealed
by center flap
on business calls.

Snaps by

SCHELL
Leather
Goods
Co., Inc.
Cincinnati 25, Ohio

CHARTS OF THE WEEK

Housing in Eight Metropolitan Areas

In these areas there were 9,299,000 dwelling units

Dwelling Units April 1, 1950

Additions would have brought the total to 11,789,000

Dwelling Units April 1, 1950

Additions

But, losses due to demolition, merger, etc. brought the net inventory to 11,342,000

Dwelling Units Dec. 31, 1956

0 4 8 12
Millions of Units

Data: Dept. of Commerce, Bureau of the Census.

Metropolitan Area	Number of Dwelling Units		Additions	Losses	Number of Dwelling Units		% Increase from 4/1/50 to 12/31/56
	4/1/50	12/31/56			(Thousands of units)		
Atlanta	199.0	92.0	16.0	275.0	38.2%		
Boston	667.0	91.0	22.0	736.0	10.3		
Chicago	1,650.0	354.0	74.0	1,930.0	17.0		
Dallas	197.0	81.0	20.0	258.0	31.0		
Detroit	858.0	271.0	45.0	1,084.0	26.3		
Los Angeles	1,522.0	703.0	94.0	2,131.0	40.0		
New York—North-Eastern New Jersey	3,954.0	840.0	163.0	4,631.0	17.1		
Seattle	252.0	58.0	13.0	297.0	17.9		

Data: Department of Commerce, Bureau of the Census.

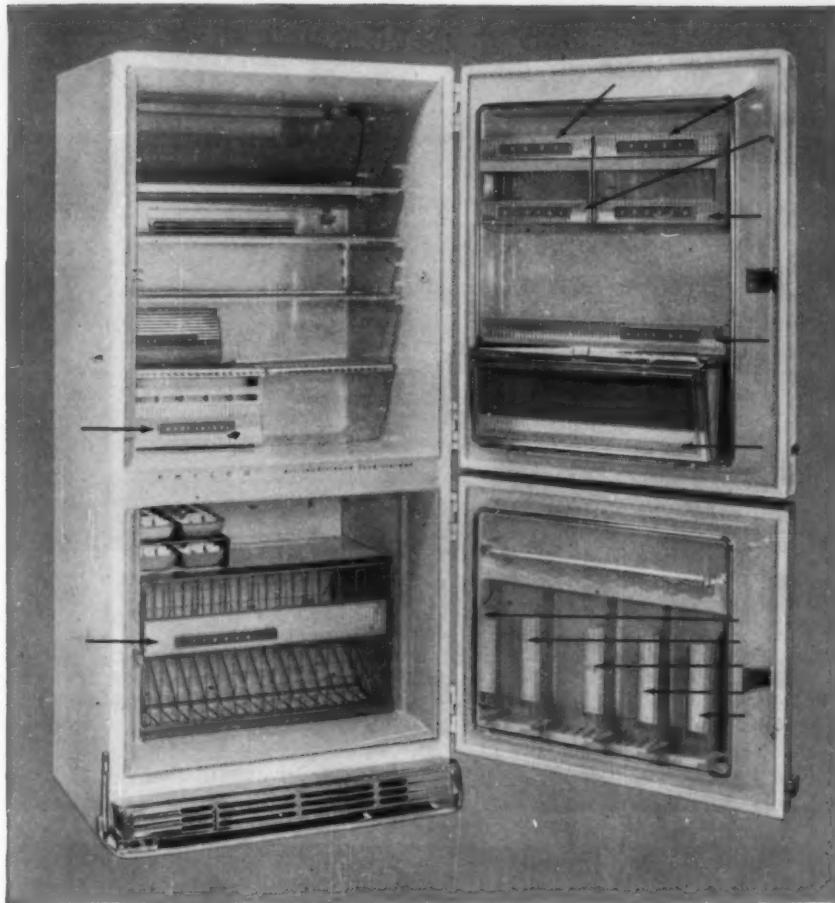
Urban Homes Show Fast Gain

Eight of the country's leading metropolitan areas piled up a total net gain of 2,043,000 dwelling units between April, 1950, and December, 1956, according to preliminary results of the National Housing Inventory conducted by the Bureau of the Census of the Commerce Dept. This was a net increase of 22% in the six and a half year period, and brought the total for the eight areas to 11,342,000 units on Dec. 31, 1956.

At the date of the last previous housing census, Apr. 1, 1950, the eight areas had a total of 9,299,000 dwelling units. Up to Dec. 31, 1956, these areas

had actually added 2,490,000 units. But to get the net gain, it's necessary to subtract from this the number of demolitions, mergers of units, and withdrawals of living quarters (a term that covers alteration into nonresidential space, rooming houses, and the like). These subtractions totaled 447,000 units for the eight areas in the six and a half years.

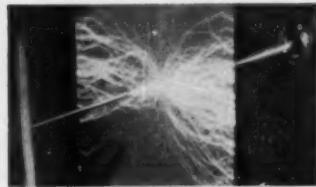
The National Housing Inventory taken in December, 1956, provided the first measure of the nation's housing supply since the 1950 census. Though the preliminary results cover only eight of the nine standard metropolitan areas



Can you use the unique combination of properties offered only by "MYLAR"?



REMARKABLE TOUGHNESS. "Mylar" is the strongest flexible plastic film ever made... tough even in extra-thin gauges!

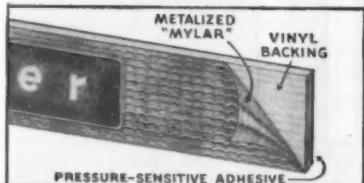


HIGH DIELECTRIC STRENGTH. Average of 4,000 volts per mil...average power factor of 0.003 at 60 cycles... dielectric constant above 3.0 at 72°F., 1,000 cycles.



THERMAL* STABILITY. Tests prove "Mylar" has an effective operating range, -80° to 300°F... won't brittle with age.

Here's how Du Pont MYLAR® helped PHILCO reduce trim costs... improve appearance



The luster of chrome, yet far less costly and easier to apply... that's the new lamination of embossed metalized "Mylar" polyester film with a pressure-sensitive backing.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY



PROBLEM: As with most consumer products, costs on the decorative trim of Philco† refrigerators have been steadily mounting. Philco was looking for a new material which would give a high-quality appearance on their new "Super Marketer" refrigerator at significantly lower costs.

SOLUTION: After extensive testing, Philco selected an embossed lamination of metalized Du Pont "Mylar"** with a pressure-sensitive backing.

RESULTS: By actual tests, Philco is now able to save on both materials and installation costs!

Color and design flexibility are assured because each panel is backed with a pres-

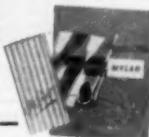
sure-sensitive adhesive. But the prime results are found in performance... that's because "Mylar" is resistant to moisture and most chemicals... is dimensionally stable... even in sub-freezing temperatures... has high abrasion resistance.

HOW CAN "MYLAR" HELP YOU? No matter what product you make, it will pay you to investigate the unique opportunities offered by "Mylar"... opportunities to speed up production, improve performance or cut costs. For dramatic proof through successful applications of "Mylar", send in coupon today.

*Registered trademark of Philco Corp.

**"MYLAR" is Du Pont's registered trademark for its brand of polyester film.

<input type="checkbox"/> Please send me information on properties, applications and types of "Mylar" available (MB-11).	E.I. du Pont de Nemours & Co. (Inc.) Film Dept., Room B-11, Nemours Bldg., Wilmington 98, Del.
<input type="checkbox"/> Please send me information on surfacing materials made with "Mylar" polyester film (MB-7).	Application _____
Name _____	
Firm _____	
Address _____	
City _____ State _____	





**Canada
welcomes
your partnership**

The world's fastest growing country welcomes your participation. Nearly five hundred branches of The Bank of Nova Scotia from the Atlantic to the Pacific are at your service.

Through these branches you have at your disposal the seasoned experience of men who have served in every phase of Canadian business.

Let us be your partner in helping Canada—and you—grow.

Write for our Monthly Review, a regular report on various phases of Canadian business.

BW-117A

The BANK of NOVA SCOTIA

New York Agency: 37 Wall St., Chicago
Representative: Board of Trade Bldg.
General Offices: 44 King St. West, Toronto,
Canada. London Offices: Walbrook House,
E.C.4; 11 Waterloo Place, S.W.1 and
representatives all over the world.



Here's why Southern fasteners help keep assembly lines on the move—fast:

Southern manufactures from the highest quality materials. ★ Southern fasteners are precision-made for precision production—are headed, threaded and tested for speedier assembly. ★ Southern's stock of over a billion screws mean that the screws you want are ready now for shipment. ★ Southern's five strategically located warehouses mean fast service—overnight in many instances.

Let Southern help speed your production. Write us your requirements on Company letterhead. Box 1360-BW, Statesville, N.C.

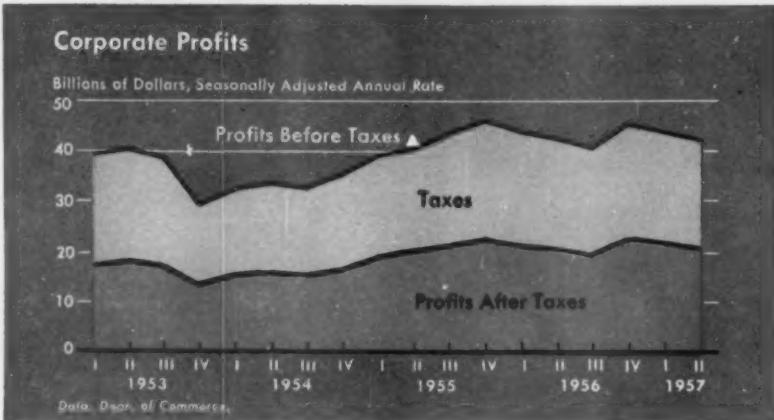
Wood Screws • Stove Bolts • Machine Screws & Nuts • Tapping Screws • Carriage Bolts • Hanger Bolts • Dowel Screws • Drive Screws



Warehouses: NEW YORK • CHICAGO • DALLAS
LOS ANGELES

surveyed, they show the impact of new housing construction in recent years. The Census Bureau will issue results

for the nine metropolitan areas and for the nation as a whole, with more detailed bulletins following later.



Profits Dip Below Last Year

Corporate profits before taxes fell in the second quarter of 1957 to an annual rate of \$42.0-billion. This was a slide both from the \$43.9-billion rate in the first quarter and the \$42.4-billion figure a year ago. After deducting

tax liabilities, second-quarter profits were \$20.5-billion—also a drop from the first quarter and from a year ago. For the six months, however, profits both before and after taxes were roughly the same as last year.

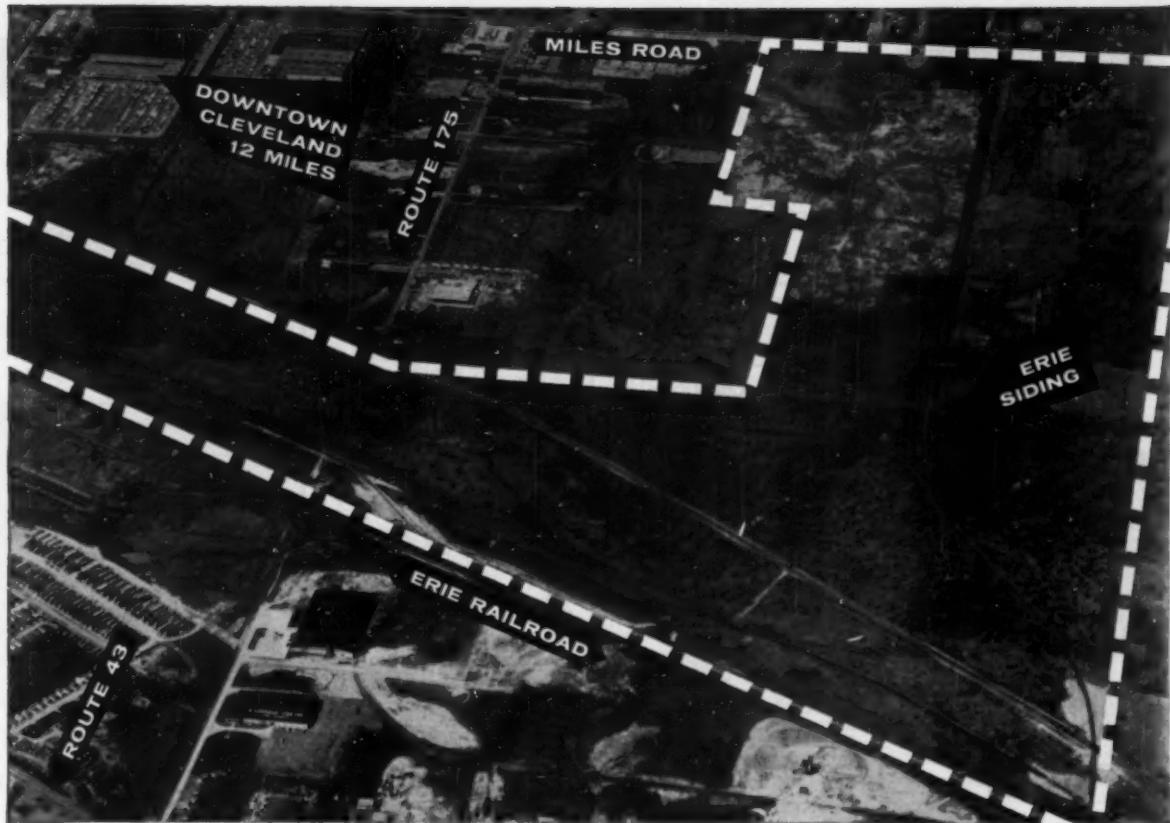


Nest Eggs Are Getting Bigger

In first-half 1957, funds stowed away by individuals in the more or less liquid forms of savings topped the same period of 1956 by \$2-billion. The Securities & Exchange Commission report for the second quarter of this year shows that individuals saved \$3.2-billion in cash and deposits, savings and loan associations, and securities, along with insurance and pension reserves (after deduction of mortgage and consumer debts acquired in the quarter). This brought the total for first-half 1957 to \$9.2-bil-

lion, 33% more than a year ago.

Holdings of securities by individuals increased, in the first and second quarters respectively, by \$3.3-billion and \$1.7-billion. U.S. savings bond holdings were reduced by \$600-million in the first quarter and \$500-million in the second. But there was a sharp rise in individuals' investments in corporate bonds and stocks, in response to the record volume of securities offerings and the higher yields obtainable. \$3.3-billion was added in first half 1957.



RAIL PLANT SITE 12 MILES FROM DOWNTOWN CLEVELAND

Excellent Location for Manufacturing Plant or Distribution Center

Among the many choice industrial locations now available along the Erie Railroad is this rapidly developing 200-acre plot in Bedford Heights, Ohio. It is owned by the Erie, and provides you direct, dependable Erie service throughout the industrial area between New York and Chicago.

This is a young area—it has been largely developed during the past few years with well-diversified, attractive industrial plants. In addition to Cleveland, the important industrial centers of Youngstown,

Warren, Akron, Canton, Massillon, Lorain and Elyria are all within 50 miles. They are also easily accessible via nearby turnpikes and state highways.

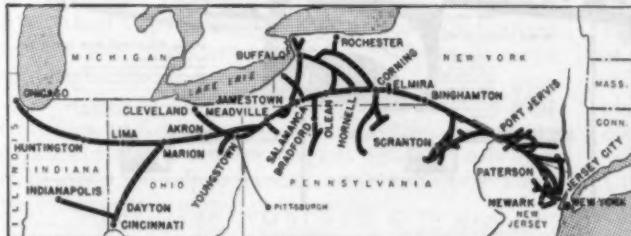
Here you will be able to draw upon a broad labor supply, including some of the most highly skilled craftsmen anywhere. Well-diversified suburban

living accommodations are nearby.

For full details—in strict confidence—mail the coupon below. A brochure on this metropolitan location, plus any additional facts you request, will be mailed to you promptly. Or write or call for information about other industrial sites on the Erie located in areas in which you are interested.

Erie Railroad

DEPENDABLE SERVICE FOR THE HEART OF INDUSTRIAL AMERICA



D. M. LYNN, Assistant Vice President
Industrial Development, Room 520-X
Erie Railroad Company, Midland Building,
Cleveland 15, Ohio

Dear Sir: Please furnish us, in strict confidence, additional information on the above plant site in the Erie area.

Name _____

Title _____ Company _____

Address _____

City _____ Zone _____ State _____

Need NATURAL GAS?
Locate Your Plant in the Gulf South

If fuel is a factor in your operations, write United Gas, P. O. Box 1407, Shreveport, La.
UNITED GAS CORPORATION • UNITED GAS PIPE LINE COMPANY • UNION PRODUCING COMPANY

In Research

Nuclear Fuel in Glass Fibers

Looks Better Than Metallic Forms

A nuclear fuel based on glass fibers rather than metal is the latest development in research for an effective means of using nuclear energy directly in a chemical process. Developed by Drs. Paul Harteck and Seymour Dondes (picture) of Rensselaer Polytechnic Institute, Troy, N. Y., the glass fiber fuel looks for all the world like long, fine, blonde tresses, but it contains an oxide of uranium-235.



Experiments at RPI find that glass fiber is an improvement over finely dispersed uranium oxide powder in their recently announced method of fixing nitrogen from the air. The fiber makes more energy available and also improves heat transfer.

Nuclear energy has long been eyed by chemical producers as a logical way to speed up some processing reactions, even to make new ones possible. The glass fiber fuel is also expected to find use in future nuclear reactors, since it is reported far more stable than metal fuel elements. Tests indicate that glass fibers can be made to withstand heats of up to 1,000°C (1,832°F) and can be varied in thickness from about 25 microns (equal to a thousandth of an inch) down to 1 micron with adequate tensile strength to resist deformation under irradiation.

Ground Is Broken at Princeton

For Giant Atom Smasher

Scientists at Princeton University and the University of Pennsylvania finally have broken ground for their \$6-million 3-billion-volt high-intensity proton accelerator. Three years of intensive planning preceded the event.

The new atom smasher, commonly known as a synchrotron, is designed to produce at least 50 times the proton current now available from accelerators at the Brookhaven National Laboratory, Upton, N. Y., and at the University of California's Radiation Laboratory (BW-May 4 '57, p94). It consists of an alternating-current electromagnet that measures some 80 ft. in diameter and weighs 400 tons.

Chief purpose of the Princeton synchrotron will be to produce artificially heavy mesons (unstable elementary particles of matter that disintegrate spontaneously in a fraction of a second) to increase man's knowledge about the fundamental properties of matter.

To do this, the new synchrotron's magnet (with a cycling rate 100 times greater than the Brookhaven

Cosmotron) will guide protons over a path many thousands of miles in length until they attain a top energy of 3-billion electron volts. The beam of protons then will be directed at target nuclei, thereby creating an intense shower of heavy mesons.

In order for the beam of protons to hit the target nuclei accurately, the synchrotron's 400-ton magnetic ring must be set on its foundation to fit with a vertical tolerance of not more than 10 one-thousandths of an inch (about the thickness of two sheets of writing paper).

Magnets as Thin as a Hair Made by Bureau of Standards

Permanent magnets no thicker than a human hair have been made from Cunife, an alloy, at the National Bureau of Standards in Washington. Cunife, which is available commercially, contains about 60% copper, 20% nickel, and 20% iron. This combination gives it both magnetic and mechanical properties. Cunife, for example, can be cold drawn, whereas most magnetic materials have to be cast or sintered into a desired shape. This property of good ductility is a big advantage in making very small magnets.

In addition, if Cunife is cold worked to the point at which its magnetic properties are adversely affected, these can be restored—or in some cases, even improved—by simple heat treatment or baking.

New Thermometer Makes It Easier For Pilots to Locate Jet Streams

A thermometer that helps a pilot locate a jet air stream and get the maximum push from it has been developed at Armour Research Foundation of the Illinois Institute of Technology, Chicago. The instrument, developed for the Air Force's Air Research & Development Command, does this by providing immediate readings on temperature changes of the air.

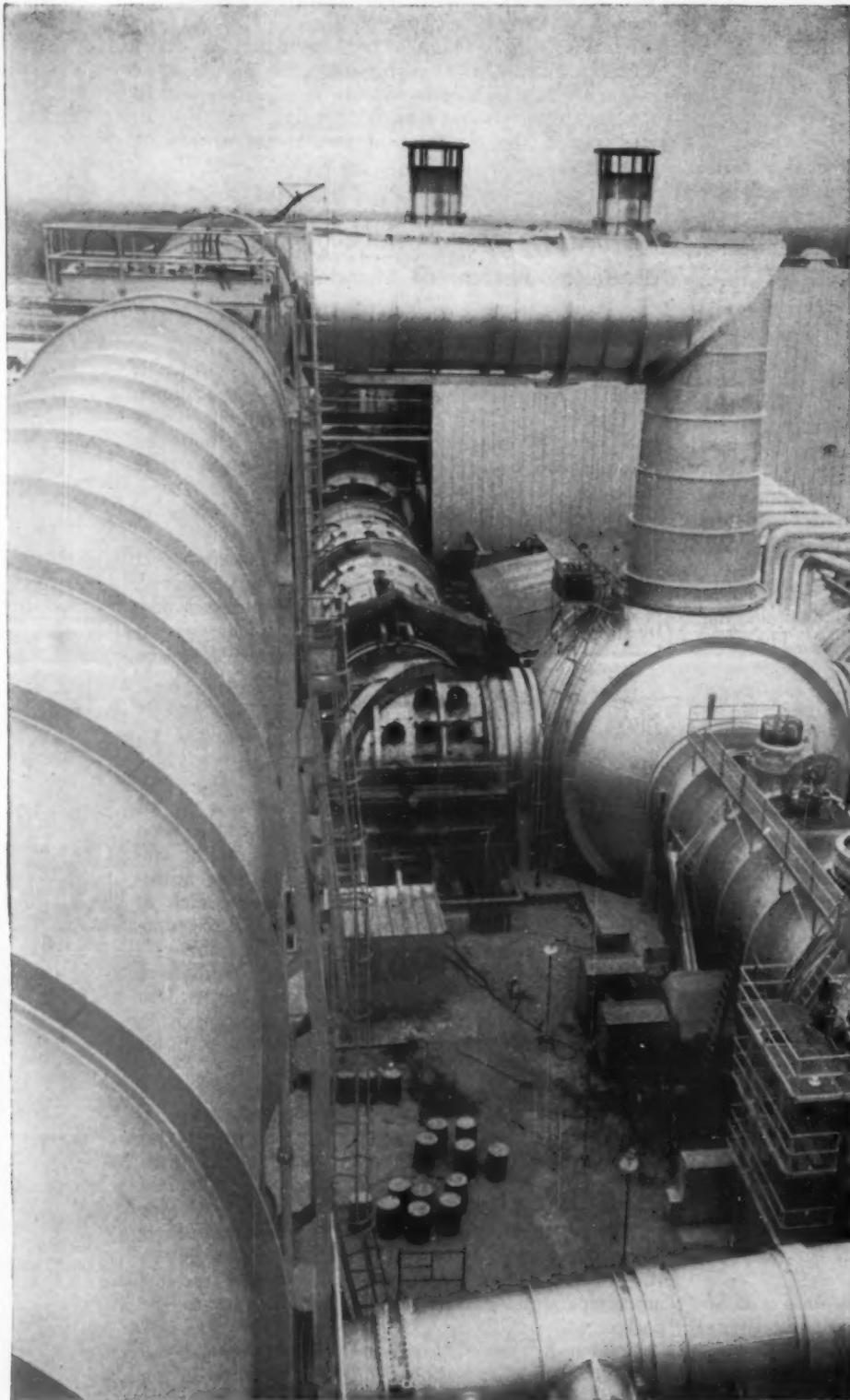
Jet streams are simply fast, high altitude currents of air, traveling from west to east, which can be used to boost the ground speed of aircraft by as much as 50%. One of their characteristics is a sharp fluctuation in air temperatures.

However, taking the temperature of the air from a plane is not simple. Under current methods, temperature readings have to be corrected to compensate for the aerodynamic heating effect produced by the high speed of aircraft. The Armour thermometer gets around this by using a uniform vortex tube—a cylindrical pipe that creates a whirlpool when air enters the thermometer at an angle to the opening. This creates a cool region in the center of the intake air pipe and transmits true free air temperature directly to an indicator inside the cockpit.

Tests at Armour's lab and at the Ames Aeronautical Laboratory of the National Advisory Committee on Aeronautics indicate that the new thermometer functions at simulated altitudes up to 40,000 ft. and speeds up to Mach 1.1.

RESEARCH

Wind Tunnels Bring High-Altitude



AIR SPEEDS of up to 2,200 mph. can be generated in this propulsion wind tunnel at Tullahoma, Tenn. Temperatures can be controlled in a range of minus-120F to plus-650F.



PORHOLES give researchers a close view of



SHROUDED for secrecy, a still-classified jet engine is bolted into position in a 12-ft.-diameter test cell before being slid into one of the larger wind tunnels at Tullahoma. Then exhaust ducting will be connected before the test starts. Test cells are designed to withstand an explosion if the test engine should conk out when the wind is turned on, as occasionally happens.

Flight Conditions Down to Earth

Array of test tunnels at Tullahoma, Tenn., aids design of planes, missiles.



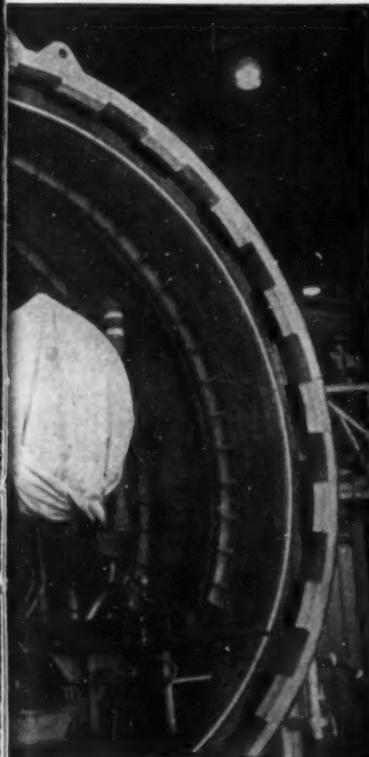
what happens to aircraft and missiles under supersonic, high-altitude conditions in tunnel.

ONE of the most vital factors in all the research and development on the latest defense weapons (BW—Oct. 19'57, p66) has undoubtedly been the development of new laboratory tools.

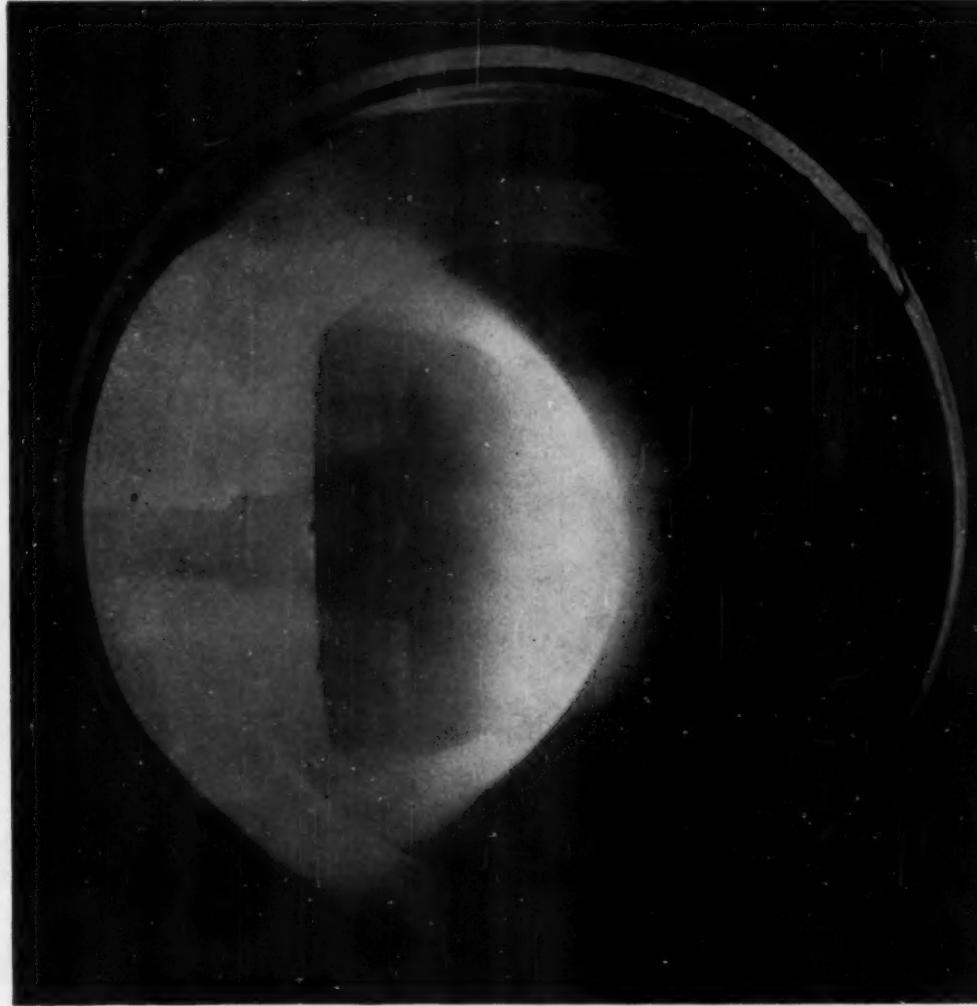
Shock tubes, rocket sleds, and giant engine test stands have become familiar research equipment; ultra-high and extremely low temperature test facilities are in the laboratories of virtually every company that holds a missile-related defense contract.

Perhaps the most spectacular laboratory tool that has sprung up through recent emphasis on supplying new and better weapons is the supersonic wind tunnel (pictures).

• **Kicking Up a Storm**—As its name



HOTSHOT tunnel (right) moves air at as much as 14,000 mph. Picture taken during test shows hemispherical model glowing with heat of wind friction—more than 6,000°F. To avoid melting the models and their mountings, tests at full blast are generally limited to about 1/100 sec. Even so, it's a punishing test.

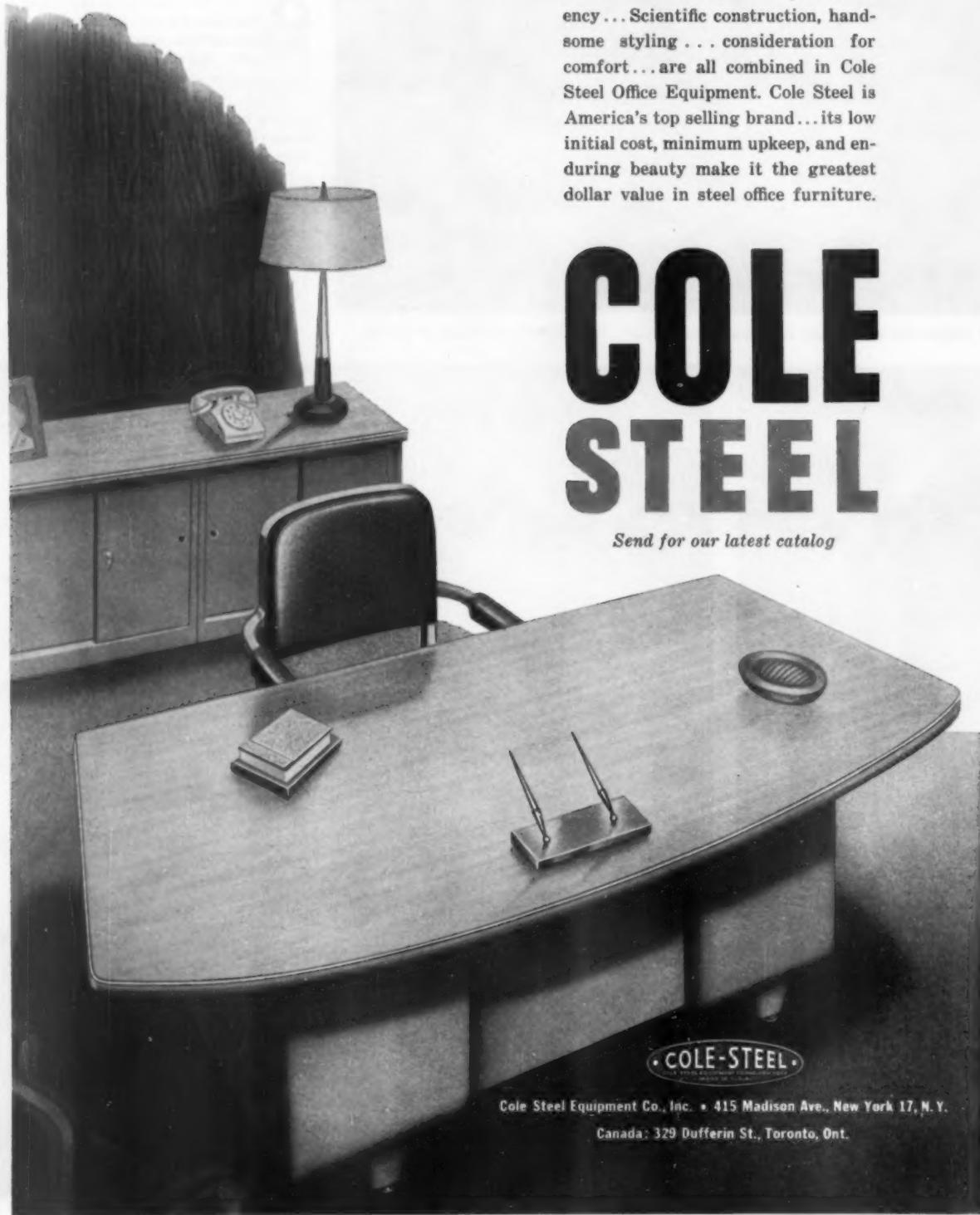


*your company is judged
by the office you keep!*

Cole Steel offices have a personality that radiates friendliness plus efficiency... Scientific construction, handsome styling... consideration for comfort... are all combined in Cole Steel Office Equipment. Cole Steel is America's top selling brand... its low initial cost, minimum upkeep, and enduring beauty make it the greatest dollar value in steel office furniture.

COLE STEEL

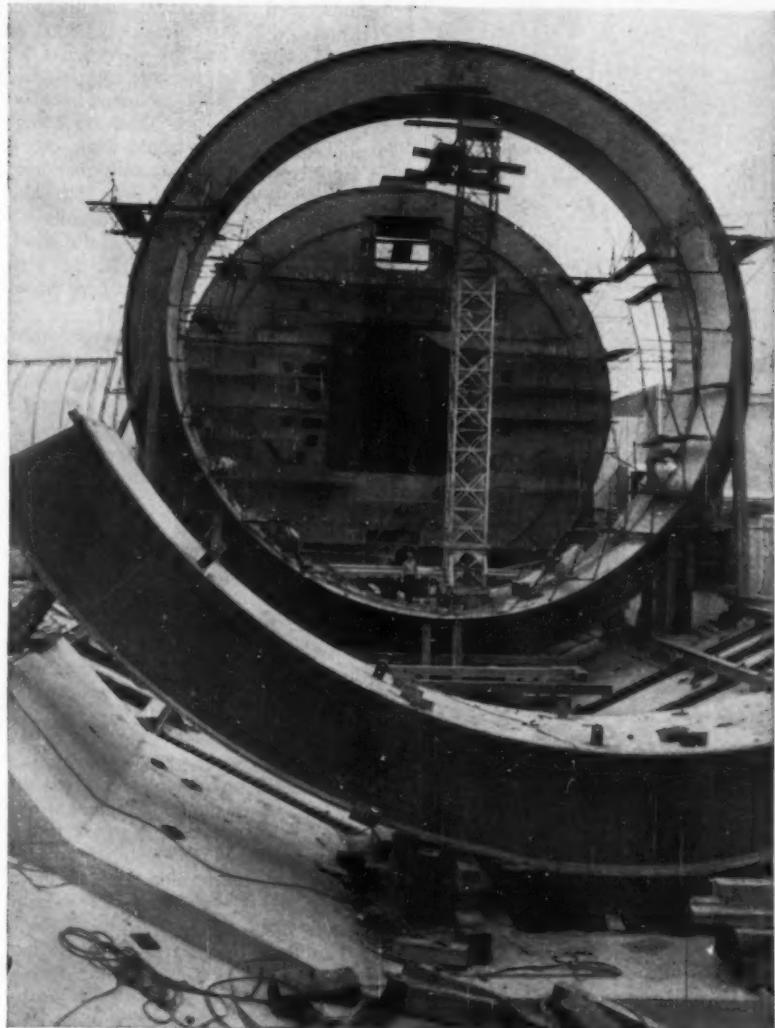
Send for our latest catalog



• COLE-STEEL •

Cole Steel Equipment Co., Inc. • 415 Madison Ave., New York 17, N.Y.

Canada: 329 Dufferin St., Toronto, Ont.



LARGEST WIND TUNNEL at Tullahoma is still under construction. When it's finished, it will be big enough to hold a two-lane highway, with room to spare.

implies, the supersonic wind tunnel can, at will, put to shame the most violent wind spawned by nature.

By creating winds vastly in excess of the speed of sound (760 mph.), a wind tunnel is able to act as a monstrous mechanical test pilot, able to show what will happen to propulsion systems and other aircraft and missile parts when they're actually put to use.

To the laws of gas dynamics, it matters little whether an object is hurtling through the atmosphere or whether the atmosphere is hurtling past the object. This means that, long before flight testing, researchers using wind tunnels can get a full preview of the effects of velocity, temperature, altitude, and similar phenomena of the upper atmosphere.

• **Saves Money, Lives**—The immediate advantage of having such test facilities is an obvious saving in time, money, and men. If a defect shows up in a

missile engine, for example, while it's being tested in a wind tunnel on the ground, the part that has failed can almost immediately be isolated, modified, and retested.

That's not the case when an engine part fails under real flight conditions. Not only may the entire craft be lost (sometimes representing a multi-million-dollar investment) but it often takes researchers a long time to discover just where the failure occurred. Testing every component in a wind tunnel at all stages of construction insures against such losses.

• **Many Tunnels**—In the past few years, many wind tunnels have been built in the nation. Government installations such as the National Advisory Committee for Aeronautics' flight propulsion laboratory in Cleveland, Ohio, have been pioneers in wind tunnel development. Universities involved in aerodynamic research, such as Cornell

and Princeton, have large supersonic wind chambers. And many companies, like Douglas Aircraft and Northrop Aircraft, also have developed costly, well-designed wind tunnels to speed work on a particular product or products.

Unquestionably the greatest single concentration of wind tunnels in the U.S., however, is at the Arnold Engineering Development Center at Tullahoma, Tenn. This center, one of 10 in the Air Force's Air Research & Development Command, has a whole stable of supersonic wind tunnels—some of them capable of blowing up winds of more than 11,000 mph.

• **Big Show**—ARO, Inc. (a private corporation, subsidiary of Sverdrup & Parcel, Inc., of St. Louis) technically acts as operating coordinator for all wind tunnel activity at Tullahoma. But since tests are scheduled and monitored by the Air Force at AEDC as well as engineers from all "user" aircraft and engine companies, the Tullahoma crew is easily the largest staff involved in wind tunnel research in the world (about 2,000 at any one time).

Already, wind tunnel work at Tullahoma has been credited with speeding up the development of the turbojet, ramjet, and turboprop engines, as well as a host of smaller rockets and missiles now in the hands of U.S. troops (BW—Oct. 12 '57, p42). It has made a vital contribution to the development of the IRBM and the ICBM.

To the thousands of manufacturers who have been involved in developmental work of missile and aircraft parts, however, Tullahoma is the place where you can go to get the answer to almost any problem involved in the general area of gas dynamics—however difficult it may be.

• **Sample Test**—The manufacturer of an advanced turbojet engine, for example, needs to know precisely at what altitude, speed, and temperature conditions the flame in his engine will "blow out."

His prototype model is sent to Tullahoma, equipped with hundreds of temperature, pressure, and mechanical measurement devices, and installed in a test cell. In a wind tunnel capable of operating under a wide variety of supersonic flight conditions, the model is then fed conditioned air simulating the same air it would encounter during flight.

From this test, the performance of the control system and other mechanical elements of the engine is learned. Thrust, fuel consumption, and the most economical cruise conditions are established. The findings generally result in corrections and improvements in the engine before it is ever built.

Wind tunnel testing will also show another manufacturer whether a cooling system is adequate for operation at

FOR YOUR
PLANT...A

CENTRALIZED LOCATION IN WEST VIRGINIA

WITHIN 500 MILES OF 4 OUT OF 5 OF AMERICA'S MAJOR MARKETS

In the center of the nation's greatest markets . . . in the center of essential resources . . . in the center of expanding opportunities . . . these are the unmatched advantages which West Virginia, "The Businessman's State," offers industry.

Cooperative civic and governmental agencies are eager to assist you. Write: Don Crisip, Executive Director, West Virginia Industrial and Publicity Commission, State Capitol Building, Room 333, Charleston 5, West Virginia.

In addition to West Virginia's ideal location you will find ample power, abundant water, natural gas, transportation, an endless supply of coal, versatile workers, mild climate, recreational and cultural advantages. We urge you to investigate The Mountain State.

THE BUSINESSMAN'S STATE **WEST VIRGINIA**

(Advertisement)

The man from Cunningham & Walsh



HE'S AN ART DIRECTOR, but working in a service station is part of John Forzaglia's job, too. In our advertising agency, the artists, writers, TV and account staff work a week a year at retail selling. This agency policy, we think, is one major reason our advertising sells harder. Cunningham & Walsh Inc., New York, Chicago, Hollywood, Los Angeles, San Francisco.

various speed, temperature, and altitude conditions.

One company had the merits of wind tunnel testing even more graphically underscored. It had produced a new type of jet engine but had no other way of knowing if it would work, short of flight-testing it. Taken to Tullahoma the engine was installed in a test cell. But almost as soon as conditions of simulated flight were varied in the wind tunnel it exploded. Obviously, this test fulfilled the center's aim—to save time, money, and lives.

• **Basic Problems**—Basic research problems as well as product development are handled at Tullahoma. In the firing of a liquid rocket motor, one big problem that designers always face is whether the thrust efficiency and relative fuel consumption of any engine will compete favorably with that of a newer solid-propellant rocket motor.

To establish this superiority a rocket would have to be sent up to specific supersonic, high-temperature conditions, and then be fired in order to telemeter a limited amount of data back to ground stations. The AEDC wind tunnels provide the same answer with much less expense.

• **Many Varieties**—There are almost as many types of laboratories at Tullahoma as there are fields of research mixed up in rocket and missile development work. One of the typical laboratories there, for example is an engine testing facility designed to develop and evaluate aeronautical air-breathing propulsion systems.

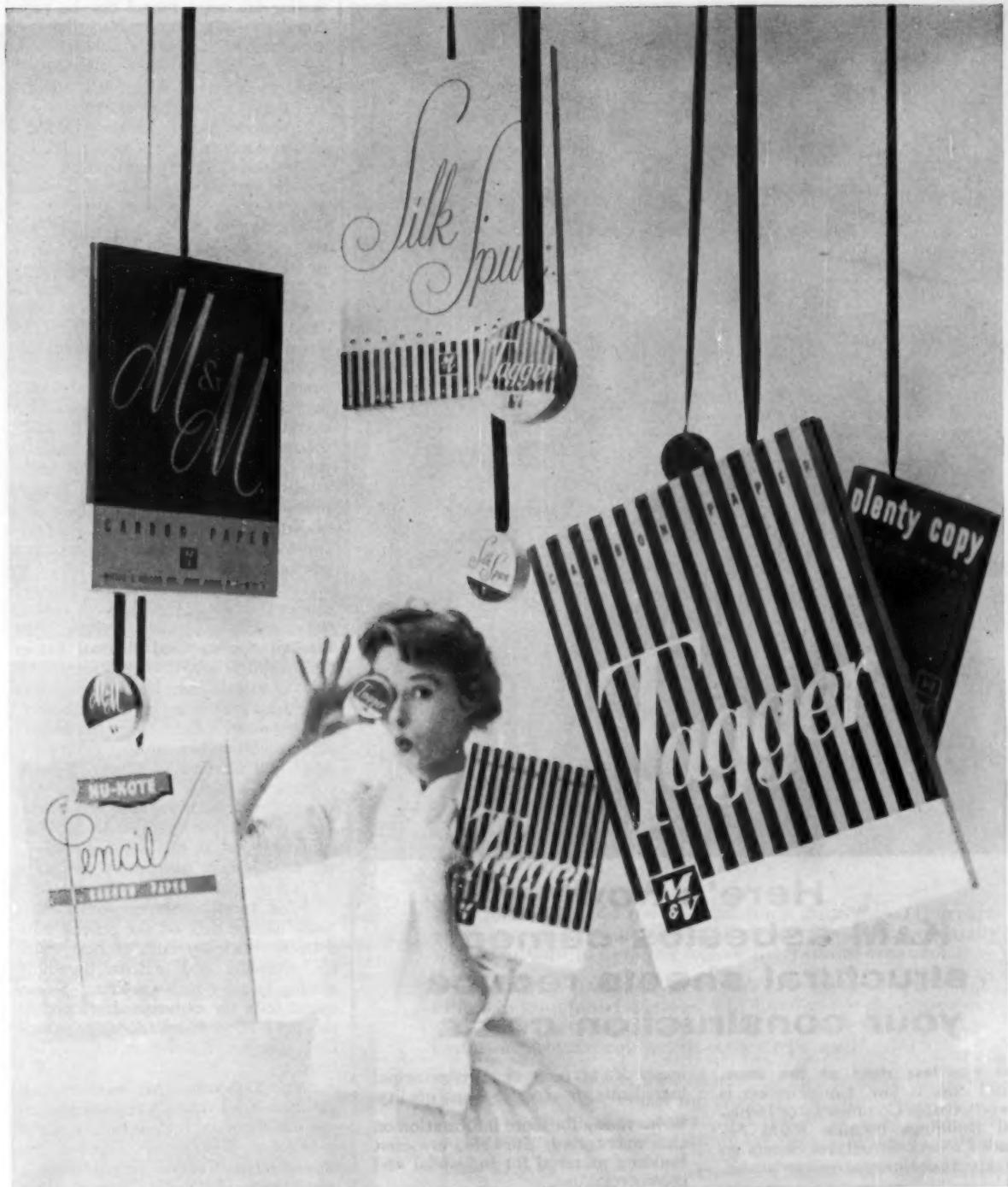
Adaptable to a variety of unit testing programs, it is used for testing turbojets, turbojets equipped with afterburners, ramjets, turboprop units, pulse jets, ducted fan power plants, and combined-cycle engines, as well as engine inlet and nozzle configuration. It is capable of testing all engines now in operation or planned.

Propulsion units up for test are mounted in sealed chambers and flown through simulated operating conditions up to 15 miles above the earth's surface. Temperatures range from minus 120F to plus 650F, with winds up to 2,200 mph.

Engines are locked into 12-ft.-diameter cells that can be varied in length from 32 to 90 ft., then fed intake air that has been conditioned to simulate the desired altitude and temperature at a mass airflow rate that permits running the engine at the desired Mach number, or air speed ratio.

• **Changing the Conditions**—This laboratory, like others at Tullahoma, basically concerns itself with solving the effects of four things on aircraft and missile parts. These are velocity, altitude, stability, and reliability.

Velocity, angle of attack (or air-stream), and temperature in the engine



Letter perfect! There's nothing like M & V typewriter ribbons and carbon paper for clean, sharp originals and legible, smudge-free copies. That goes for Tagger, Silk Spun, M & M and Plenty Copy . . . ribbons and carbon paper matched to each other—and unmatched by any

other—for superior work! M & V's been making good impressions for 75 years . . . why not let them make some for you? Your stationer can tell you which of these smartly packaged products is right for your job. Call him today, or write Dealer Sales Department



BURROUGHS DIVISION, BURROUGHS CORPORATION, DETROIT 32, MICHIGAN



Here's how K&M asbestos-cement structural sheets reduce your construction costs

Cost you less right at the start. Initial cost is low. Construction is inexpensive for Commercial or Industrial Buildings because K&M Asbestos-Cement Structural Sheets go up fast with ordinary carpenter's tools.

Save money year in and year out. They won't burn, rot, or corrode. Life is unlimited. They're vermin-proof, and weather-resistant. Require practically no maintenance. Need no protective painting.

Provide economy in 101 applications. Use any of the three kinds of K&M Structural Sheets—Linabestos, Apac, and Sheetflextos—for exterior siding or interior sheathing. K&M makes asbestos serve the needs of industry through a wide range of products. In

every K&M product, two principal ingredients are experience and quality.

Write today for more information on this attractive, durable, low-cost building material for industrial and commercial use.



KEASBEY & MATTISON

COMPANY • AMBLER • PENNSYLVANIA
In Canada: Atlas Asbestos Co. Ltd., Montreal, Toronto, Winnipeg, Vancouver and Edmonton

testing lab wind tunnel can be varied simultaneously, thus creating the same sequence of conditions as the unit being tested would encounter in taking off, climbing, flying, and landing. Velocity and angle are varied in the tunnel with a supersonic nozzle that works like a garden water hose. Speed is controlled by squeezing or expanding the nozzle and by the angle at which the nozzle points at the object under test.

The throat of the 26-in.-square nozzle in this wind tunnel is controllable to within a thousandths of an inch.

- **"Hotshot"**—Another, and somewhat newer wind tunnel, appropriately called "Hotshot," is capable of simulating upwards of 11,000 mph. wind speeds and 15,000°F temperatures. Test runs in this tunnel can't last more than a fleeting part of a second, else the tunnel itself would start to melt. But more than 700 successful test runs have been made in the tunnel—and have proved it to be a substantial improvement over tunnels previously used. It is officially a part of Tullahoma's gas dynamics facilities and was designed and built by engineers and scientists at the center.

The major purpose of this Hotshot tunnel is to explore methods of cooling the surface of missiles as they break through the so-called thermal barrier at super-high speeds and to investigate ways of withstanding the high pressures and temperatures encountered there.

Long-range missile designers, besides coping with supersonic speed, have the additional problem of coping with air friction at a missile's nose as it re-enters the denser atmosphere near the earth's surface. At hypersonic speeds, any nose cone is heated by friction, and the missile may literally turn into a meteor if it's not protected.

Wind tunnel tests give researchers badly needed data on the general aerodynamic efficiency rates of heat transfer, pressures, and material durability needed to solve such problems. Subsequent tests on materials developed in the light of such knowledge then tell them whether or not their solutions are correct.

- **Some Difference**—All wind tunnels get their wind velocity through the expansion of compressed air by one means or another. Tullahoma's Hotshot employs a slightly unusual system, though. Air is pumped into a storage chamber and sealed off from the downstream portion of the wind tunnel by a plastic diaphragm. The sealed downstream portion is then pumped down to near vacuum condition. With these preliminary conditions set, a powerful electrical arc is triggered into the upstream section to heat the air to about 15,000°F and to increase the pressure there to about 20,000 lb. per sq. in.

Under this tremendous pressure, the plastic diaphragm breaks, and hot air



R. H. Macy & Co., Roosevelt Field, L.I., N.Y. Architects: Skidmore, Owings, and Merrill; Consulting Engineers: Syska and Hennessy, Inc.; General Contractor: Turner Construction Co.; Mechanical Contractor: J. E. Schecter Corp.



Comfort-conditioned shopping insures profitable customer and employee relations, effective store merchandising. American Blower fans and air-conditioning units help make this possible at Macy's.



C. V. Scott, of American Blower; A. L. Windman, of Syska and Hennessy, Inc.; and J. E. Schecter, of J. E. Schecter Corp., review blueprints used in installing Macy's air-conditioning system.

Macy's newest serves one million thrifty shoppers in air-conditioned comfort

A PROBLEM: How do you air-condition a three-level, 144-department store and maintain every inch of sales space — especially when you want to keep the roof clear for future expansion?

THE SOLUTION: Designers for Macy's new Roosevelt Field, L.I., suburban store found the answer by locating the equipment in a plenum area between roof and ceiling. Yet, space was so precious, that standard-sized equipment couldn't be used.

RESULT: American Blower's experience and engineering know-how enabled them to meet the challenge of this unusual installation. Air-conditioning and air-handling units were redesigned to give the required capacity within the size and space limitations.

Are you planning to air condition? If so, call your nearest American Blower branch office. You'll get dependable, quality products — helpful service all the way! American Blower Division of American-Standard, Detroit 32, Michigan. In Canada: Canadian Sirocco products, Windsor, Ontario.

AMERICAN BLOWER

Division of **AMERICAN-Standard**



QUALITY PROTECTS YOUR INVESTMENT . . . AMERICAN-Standard QUALITY IS AVAILABLE AT NO EXTRA COST

clues:

To The Solution
of Management
Men's Problems

EMPLOYMENT

Positions Wanted

Canadian planning and purchasing executive wishes contact American company desirous establishing in Canada. PW-6433, Business Week.

Public Relations Director. 42, **seasoned**, proven top publicist. Jeff Lee, 40 Park Place, Newark, N. J. (Mitchell 3-4440).

Sales Staff Executive seeks chance for more scope and growth in small or medium size firm—with or without financial investment. Sales and sales management "know-how" based on six years in present capacity with major corporation plus four years experience in similar work. Proven persuasive ability in writing and speaking. In middle thirties, fine education, married. Will travel or relocate. PW-6490, Business Week.

SPECIAL SERVICES

W2 Forms for '57. Free 100 pg. Catalog. Accountants' Supply Co., 305 Canal St., N.Y.C. 13.

Want a Branch Office in Chicago, Los Angeles, Kansas City or Baltimore? Our full staffed offices in these and other cities have desk and file space, Secretarial Service, Telephone Answering, Mail Forwarding, and many other facilities. Write Dept. WB for descriptive brochure on our services. Manpower, Inc., 820 North Plankinton Avenue, Milwaukee, Wisconsin.

Registered Patent Attorney

Patent Information Book without obligation. G. Miller, 10-BW 1, Warner Bldg., Wash., D. C.

BUSINESS OPPORTUNITIES

For Sale 80 Acres or less, R.R. and Utilities. Any type industry Met. N. Y. Write owner, P. O. Box 26, Carlsbad, N. J.

Free Catalog. Contains hundreds of businesses, farms and income properties throughout U.S., Canada. Specify type and location desired. Deal direct with owners. U.I. Buyers Digest, 1608 Hillhurst, Dept. BW-7, Los Angeles 27, Calif.

Exclusive Distributors—Esther Williams Swimming Pools. Great new business opportunity in booming industry. Top brand and product in the field. Nationally advertised. Complete lines for both homes and motels. 1958 program starting now biggest ever in the industry. Profit potential of \$25,000 to \$250,000 from five-figure inventory investment. Write now for full details. International Swimming Pool Corporation, 103 Court Street, White Plains, N. Y.

126 scenic acre Island property, many fine buildings, all utilities, near Maine coast. Good for research, camp or school. Cost 1 1/2 million, sell for 10% or lease. BO-6432, Business Week.

Tool Manufacturers! Established successful concern can finance and distribute your tool to Automotive Trade through its 50 man national sales organization. BO-6064, Business Week.

R&D firm will consider merger. Decade of national reputation, staff 50, Middle West. Inquiries cordially invited. BO-6319, Business Week.

The Truth—If you are a \$5,000-to-\$20,000 investor you should have our free folder "What Is A Royalty" for higher monthly income than is possible elsewhere. Address BW Operator, Room 724, Cooper Bldg., Denver 2, Colorado.

CAPITAL TO INVEST

Commercial and Real Estate Financing. 1st & 2nd Mortgages, Construction Loans, Chattel Loans on Machinery, Equipment, Fixtures & Inventory, Sale & Leaseback. Present Financing Consolidated and Increased—Payments Reduced, Receivable Discounting, Re-Discounting and Installment Financing, Long Term Subordinated Note and Debenture Financing. New Ventures Financed. Promotional financing, U. S. & Canada. Sy Field Co., 1457 Broadway, New York, N. Y.

flashes out through a conical nozzle, which increases the velocity of the air-stream an instant before it strikes the model under test in the evacuated section of the tunnel.

The force generated by this method of driving hot air through a nozzle by means of an electric discharge can be so powerful that portions of the wind tunnel ducting and bits of glowing, molten metal sometimes strike the model under test.

• **Biggest of All—Largest wind tunnel** in the major testing laboratories at Tullahoma is a propulsion wind tunnel that involves a new concept in jet engine testing. This tunnel is capable of testing extra-large models or full-scale aircraft and missiles—whichever seems more practical for the problem in question.

It has two closed-circuit test sections. One is currently used in transonic testing and the other, still under construction, will produce supersonic wind velocities when completed. Top speeds obtainable in this supersonic tunnel should be able to exceed 3,000 mph. And it will be large enough to permit building—if engineers desired it—a two-lane highway through it.

Many problems associated with various types of engine inlets, at high speeds and high altitudes, will be solved in this wind tunnel in the months to come.

• **No Restrictions—**Although Tullahoma is operated by the Air Force its wind tunnels are not restricted to use by industries working on Air Force systems. Any contractor, university, or other research organization may test models or parts at the center. If desired, special work areas can be partitioned off to guard secrets of the design that's under test.

The center is situated on a 1,500-acre tract within a 41,000-acre area formerly used as an Army training base (Camp Forest, World War I). Because of the intense noise created by the testing laboratories, there are no housing facilities on the base. The closest house is about five miles away.

The annual power consumption of the center ranges up to 700-million kwh., close to the consumption of Atlanta or Memphis. Because of the heavy load needed, major testing is conducted from midnight to dawn in order not to compete with private industry and the public for available electric power.

The AED center at Tullahoma is thus more than a service organization—it is concerned with the broadest kind of development of new aircraft and missile parts. For that reason the center, far from becoming obsolete in the years ahead, will probably have to expand steadily to keep up with the demands of industry. END



minox
camera
the fabulous
GIFT
they'll
always carry
in their pocket

At all camera dealers
Minox III-S with Case
and Chain . \$139.50

Write for literature
KLING PHOTO CORP.
257 Fourth Ave., New York 10, N.Y.



WATER
RECLAMATION
PROBLEM?

DENVER Thickeners,
Filters, Pumps and
complete equipment
for Ore Dressing and
Process Industries.



DENVER Equipment Co.
1414 17th St., Denver 17, Colorado



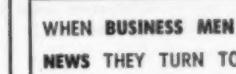
Gemar Associates
CONSULTING
MATERIALS HANDLING
ENGINEERS
over 25 years experience
GREENWICH, CONNECTICUT



Recorder Relaxing
A family instrument, of high professional standards.
Made of finest imported, selected woods.
Endorsed by leading musical educators.
Send check or M.O. to
ALLEGRO Musical Instrument Co., 372 W. 21 St.,
New York 11, N.Y.
\$4.99
\$12.00
FREE Instruction Book



FREE SERVICE TO BUYERS!
BOTTLING COMPANY-Coca Cola. Exclusive
franchise for National Park, 557 accounts. Excel-
lent volume. Northwest United States. Est. 32
yrs.; dissolving partnership. Price right.
PRODUCE COMPANY-Wholesale. Annual gross
over \$6,700,000. Minnesota. Est. 37 yrs.; owners
retiring. Excellent brick bldg; Railway spur. A-1
equipped. Inspection invited. Reasonable.
Not Agents or Brokers
REO SYSTEM, INC.
6 W. 10th, Kansas City 5, Missouri



**WHEN BUSINESS MEN WANT BUSINESS
NEWS THEY TURN TO BUSINESS WEEK**

ADVERTISERS IN THIS ISSUE

Index for Business Week November 2, 1957

ABBEY-ETNA CO.	182	FORMICA CORP.	115	REM-CRU TITANIUM, INC.	79
Agency—Eversole-Lewis, Inc.		Agency—Perry Brown, Inc.		Agency—G. M. Basford Co.	
AIR EXPRESS DIV. OF RAILWAY EXPRESS AGENCY, INC.	17	GAR WOOD INDUSTRIES	184	REINHOLD RAND, DIV. OF SPERRY RAND CORP.	181
Agency—Burke Dowling Adams, Inc.		Agency—Meldrum & Fowsmith, Inc.		Agency—Perry & Pearl, Inc.	202
ALLEGHENY LUDLUM STEEL CORP.	185	GEMAR ASSOCIATES	202	Agency—Reo Adv. Agency	
Agency—W. B. Walker Adv., Inc.		GENERAL ELECTRIC CO.	146-147	REPUBLIC AVIATION CORP.	87
ALLEGRY MUSICAL INSTRUMENT CO.	282	GENERAL FIREPROOFING CO.	104	Agency—deGarmo, Inc.	
Agency—Murray Klein, Assoc., Inc.		GENERAL PRECISION EQUIPMENT CORP.	79-71	RIEGEL PAPER CORP.	144
ALLIS-CHALMERS MFG. CO.	81	GENERAL PRECISION LABORATORY, INC.	72	Agency—W. H. Young, Inc.	
Agency—Compton Adv., Inc.		GENERAL TELEPHONE SYSTEM	28	JOHN A. REEBLING'S SONS CORP.	19
ALL-STEEL EQUIPMENT, INC.	64	Agency—H. B. Humphrey, Alley & Richards, Inc.		Agency—Hazard Adv. Co.	
Agency—E. B. Hollingsworth & Assoc.		GOODRICH-GULF CHEMICALS, INC.	75	ROYAL TYPEWRITER CO.	181
ALLWAC CORP.	38	Agency—The Griswold-Eshleman Co.		Agency—Young & Rubicam	
Agency—Raymond E. Wallace Adv., Inc.		GRANUTORY TIME & RUBBER CO., INC.	4th Cover	ST. REGIS PAPER CO.	82-83
AMERICAN BLOWER CORP.	291	Agency—Gear, DuBols & Co., Inc.		Agency—Cunningham & Walsh, Inc.	
Agency—Brooke, Smith, French & Dorrance, Inc.		GRAPLEX, INC.	73	THE SCHLEICH LEATHER GOODS CO.	188
AMERICAN CHEMICAL PAINT CO.	18	Agency—Gear, DuBols & Co., Inc.		Agency—McCracken & McKim	
Agency—Gray & Rogers		GREAT LAKES STEEL CORP.	28-29	SCIENTIFIC AMERICAN	19
ARABOL MFG. CO.	27	Agency—Campbell-Ewald Co.		Agency—Calhoun & Holden, Inc.	
Agency—R. T. O'Connell Co.		GREAT NORTHERN RAILWAY	170	SHARON STEEL CORP.	127
ARMCO STEEL CORP.	188	Agency—John W. Forney Inc.		Agency—Duffy, McClure & Winter, Inc.	
Agency—N. W. Ayer & Son, Inc.		GRINNELL CO., INC.	11	SHAW-BARTON, INC.	162
ARMSTRONG CORP.	187	Agency—Noyes & Co.		Agency—The Bayless-Kerr Co.	
Agency—Ogley, Benson & Mather, Inc.		GUARANTY TRUST CO. OF NEW YORK	94	SHERATON CORP. OF AMERICA	3rd Cover
ASSOCIATED SPRINGS CORP.	130	Agency—Fuller & Smith & Ross, Inc.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
Agency—Dale, Frazee, Inc.		THE E. F. HAUSERMAN CO.	189	SONGSCRIBER CORP.	133
BABCOCK & WILCOX CO.	187	Agency—Fuller & Smith & Ross, Inc.		Agency—Fuller & Smith & Ross, Inc.	
Agency—O. B. Tyson & Co., Inc.		HERCULES POWDER CO.	34	SOUTHERN SCREW CO.	190
BAKELITE CO.	24-25	Agency—Fuller & Smith & Ross, Inc.		Agency—Ayer Gillett, Inc.	
Agency—J. M. Mathes, Inc.		HINDE & DAUCH	88	STRIP STEEL DIV. JONES & LAUGHLIN	110
BALTIMORE & OHIO RAILROAD	174	Agency—Howard Swink Advertising Agency, Inc.		Agency—H. M. Kilian	
Agency—The Richard A. Foley Adv. Agency, Inc.		HOOKER ELECTROCHEMICAL CO.	86	STUDEBAKER-PACKARD CORP.	181
BANK OF NOVA SCOTIA	198	Agency—The Bunnill Co., Inc.		Agency—Burke Dowling Adams, Inc.	
Agency—J. Walter Thompson Co., Ltd.		F. C. HUYCK & SONS	122-123	TORRINGTON MFG. CO.	74
BANKERS TRUST CO.	3	Agency—Fuller & Smith & Ross, Inc.		Agency—Henry A. Loudon Adv., Inc.	
Agency—Donahue & Coe, Inc.		HYDROWAY SCALES, INC.	162	TOWMOTOR CORP.	99
BITUMINOUS COAL INSTITUTE	128	Agency—Sales & Merchandising Counsellors		Agency—Howard Swink Advertising Agency, Inc.	
Agency—Van Sant, Dugdale & Co., Inc.		INGERSOLL MILLING MACHINE CO.	184	TOWNSEND CO.	16
BOILING SPRINGS	78	Agency—Fuller & Smith & Ross, Inc.		Agency—Bond & Starr, Inc.	
Agency—Campbell-Ewald Co.		INTERNATIONAL NICKEL CO., INC.	182	THE TRANE CO.	8-9
BOWER ROLLER BEARING DIV., FEDERAL-MOGUL-BOWER BEARINGS, INC.	2nd Cover	Agency—Marschalk & Pratt Div. of McCann-Erickson		Agency—Campbell-Mithun, Inc.	
Agency—MacManus, John & Adams, Inc.		J. C. HUYCK & SONS	124	TRAVELERS INSURANCE CO.	96
BRADLEY CONTAINER CORP.	176	Agency—Fuller & Smith & Ross, Inc.		Agency—Young & Rubicam, Inc.	
Agency—Cooper & Conner, Inc.		HYDROWAY SCALES, INC.	162	TUBE TURNER	23
BRADLEY WASHFOUNTAIN CO.	186	Agency—Howard Swink Advertising Agency, Inc.		Agency—The Griswold-Eshleman Co.	
Agency—Kirkpatrick-Drew Adv.		INGERSOLL MILLING MACHINE CO.	184	UNION BARGE LINE CORP.	198
BROWN CO.	93	Agency—Fuller & Smith & Ross, Inc.		Agency—Ketchum, MacLeod & Grove, Inc.	
Agency—J. M. Mathes, Inc.		INTERNATIONAL NICKEL CO., INC.	182	UNITED ENGINEERS & CONSTRUCTORS, INC.	89
BUFFALO FORGE CO.	142	Agency—Fuller & Smith & Ross, Inc.		Agency—Gray & Rogers	
Agency—Melvin F. Hall Adv. Agency, Inc.		J. C. HUYCK & SONS	124	UNITED GAS PIPE LINE CO.	192
BULLDOZER ELECTRIC PRODUCTS CO.	166	Agency—Fuller & Smith & Ross, Inc.		Agency—Bosell & Jacobs, Inc.	
Agency—MacManus, John & Adams, Inc.		HYDROWAY SCALES, INC.	162	U. S. STEEL CORP.	20-21
BURROUGHS CORP.	199	Agency—Fuller & Smith & Ross, Inc.		Agency—Batten, Barton, Durstine & Osborn, Inc.	
Agency—Campbell-Ewald Co.		INGERSOLL MILLING MACHINE CO.	184	WARNER & SWASEY CO.	49
CHASE BRASS & COPPER CO.	94	Agency—Fuller & Smith & Ross, Inc.		Agency—Goldschmid-Eshleman Co.	
Agency—Cunningham & Walsh, Inc.		INTERNATIONAL NICKEL CO., INC.	182	WEST VIRGINIA INDUSTRIAL & PUBLICITY COMM.	198
THE CHASE MANHATTAN BANK	58-59	Agency—Fuller & Smith & Ross, Inc.		Agency—Advertising, Inc.	
Agency—Kenyon & Eckhardt, Inc.		J. C. HUYCK & SONS	124	WESTERN MARYLAND RAILWAY CO.	162
CHICAGO BRIDGE & IRON CO.	178	Agency—Fuller & Smith & Ross, Inc.		Agency—Marchalk & Pratt Div. of McCann-Erickson, Inc.	
Agency—Russell T. Gray, Inc.		JONES & LAUGHLIN	145	WESTERN PACIFIC RAILROAD	183
CHICAGO, ROCK ISLAND & PACIFIC R.R.	186	Agency—Fuller & Smith & Ross, Inc.		Agency—Harrington-Richards, Div. of Fletcher D. Richards	
Agency—The Caples Co.		KAYDON ENGINEERING CORP.	58	WESTINGHOUSE ELECTRIC CORP.	38-31
C.I.T. CORP.	177	Agency—Kluan-Van Pietersen-Dunlap, Inc.		Agency—Fuller & Smith & Ross, Inc.	
Agency—Fuller & Smith & Ross, Inc.		KEASBEY & MATTISON CO.	200	WESTINGHOUSE ELECTRIC CORP.	100
CLUES (CLASSIFIED ADVERTISING)	202	Agency—Ruthrauff & Ryan, Inc.		Agency—McCann-Erickson, Inc.	
COLE STEEL EQUIPMENT CO., INC.	186	KLING PHOTO CORP.	202	WHEELABRATOR CORP.	92
Agency—Hub Assoc., Inc.		Agency—Herbert Baker Adv., Inc.		Agency—The Jaqua Co.	
COMMERCIAL CRANE CO.	90	THE FLAME ELECTRIC CO.	12	S. B. WHITE DENTAL MFG. CO.	106
Agency—Van Sant, Dugdale & Co., Inc.		Agency—The Haynes-Kerr Co.		Agency—Hazard Adv. Co., Inc.	
CONNECTICUT GENERAL LIFE INSURANCE CO.	22	LIGHTOLIER, INC.	182	WHITING CORP.	6-7
Agency—Cunningham & Walsh, Inc.		Agency—Alfred Auerbach Assoc.		Agency—Walde & Briggs, Inc.	
CONTINENTAL CAN CO.	192-193	LINK-BELT CO.	171	WHITING-PLOVER PAPER CO.	88
Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—Kluan-Van Pietersen-Dunlap, Inc.		Agency—The Brady Co.	
THE COOPER-BESSEMER CORP.	87	MALAYAN TIN BUREAU	63	ZONOLITE CO.	82
Agency—The Griswold-Eshleman Co.		Agency—Gran & Rogers		Agency—Henri, Hurst & McDonald, Inc.	
COTTON FIBER PAPER MFGRS.	116	MARKEM MACHINE CO.	166		
Agency—J. M. Mathes, Inc.		MEAD-ATLANTA PAPER CO.	124		
CUNNINGHAM & WALSH, INC.	198	Agency—Culver Adv., Inc.			
Agency—Cunningham & Walsh, Inc.		MERRITT-CHAPMAN & SCOTT CORP.	33		
DE LAVAL STEAM TURBINE CO.	97	Agency—Hoffman-Manning, Inc.			
Agency—Michigan Cathode, Inc.		MILFORD RIVET & MACHINE CO.	92		
DENVER EQUIPMENT CO.	282	Agency—Graceman Adv., Inc.			
Agency—Galen E. Broyles Co., Inc.		MUTUAL BENEFIT LIFE INSURANCE CO.	32		
THE DIAMOND MATCH CO.	119	Agency—Grant Adv., Inc.			
Agency—Dorenum & Co.		NATIONAL ALUMINATE CORP.	77		
DOW CHEMICAL CO.	157	Agency—Fuller & Smith & Ross, Inc.			
Agency—McManus, John & Adams, Inc.		NATIONAL SCALPEL CO.	182		
DRAGO CORP.	181	Agency—Fuller & Smith & Ross, Inc.			
Agency—Ketchum, MacLeod & Grove, Inc.		NATIONAL TOOL & DIE MFRS. ASSN.	188		
E. I. DUPONT DE NEMOURS & CO.	51, 189	Agency—Fuller & Smith & Ross, Inc.			
Agency—Batten, Barton, Durstine & Osborn, Inc.		NEW DEPARTURE DIV. GENERAL MOTORS CORP.	188		
E. I. DU PONT DE NEMOURS & CO. (INC.)	51	Agency—D. F. Broth & Co.			
Agency—N. W. Ayer & Son		NEW ENGLAND MUTUAL LIFE INSURANCE CO.	188		
EASTMAN KODAK CO.	140	Agency—Batten, Barton, Durstine & Osborn, Inc.			
Agency—J. Walter Thompson Co.		NORFOLK & WESTERN RAILWAY CO.	69		
EMERY AIR FREIGHT CORP.	111	Agency—Houch & Co., Inc.			
Agency—J. M. Mathes, Inc.		THE OKONITE CO.	107		
EMPLOYERS MUTUALS OF WAUSAU	4	Agency—Doyle, Kitchens & McCormick, Inc.			
Agency—J. Walter Thompson Co.		PARKER-HANNIFIN CORP.	178		
ENJAY CO., INC.	167	Agency—Fuller & Smith & Ross, Inc.			
Agency—McCann-Erickson, Inc.		PARSONS PAPER CO.	184		
ERIE RAILROAD CO.	191	Agency—Gibson & Barresi			
Agency—The Griswold-Eshleman Co.		PLYMOUTH DIV. OF CHRYSLER CORP.	117		
EBERHARD FABER PENCIL CO.	121	Agency—N. W. Ayer & Son, Inc.			
Agency—Anderson & Calma, Inc.		H. K. PORTER CO., INC.	118		
FEDERAL PACIFIC ELECTRIC CO.	99	Agency—Ruthrauff & Ryan, Inc.			
Agency—Hicks & Grint, Inc.		PRATT & WHITNEY CO., INC.	128		
FORD INSTRUMENT CO., DIV. OF SPERRY RAND CORP.	183	Agency—Hugh H. Graham & Assoc., Inc.			
Agency—G. M. Basford Co.		J. F. PRITCHARD & CO.	88		
FORD MOTOR CO.	14-15	Agency—Carter Adv. Agency, Inc.			
Agency—J. Walter Thompson Co.		RADIO CORP. OF AMERICA (COMM. ELECTRONIC PRODS.)	126		
		Agency—Al Paul Leffson Co., Inc.			
		READING RAILROAD	78		
		Agency—The Richard A. Foley Adv. Agency, Inc.			

ADVERTISING SALES STAFF

Midwestern Advertising Sales Manager

John P. Taylor—Chicago

Atlanta 3...Douglas C. Billian, 134 Peachtree St. N. W., Jackson 3-0951	
Baltimore 2-7171	
Chicago 11...John P. Besser, Herbert M. Higgins, James E. McShane, Robert Sidor, 555 N. Michigan Ave., Mohawk 4-5860	
Cleveland 16...William C. Bradford, John G. Cashin, Hanna Bldg., Superior 1-7000	
Dallas 2...Gordon L. Jones, Vaughn Bldg., Riverside 7-5111	
Denver 2...John W. Patten, Mile High Center, 1740 Broadway, Alpha 5-3981	
Detroit 26...Richard J. McGurk, C. C. Randolph, Fenwick Bldg., Woodward 2-1793	
Los Angeles 17...Albert L. Blawie, 1125 West Sixth St., Wilshire 6-6981	
New York 16...Harold E. Choute, John H. Glover, G. Robert Griswold, Hugh F. Juraschek, A. T. Orlitz, John H. Stevenson, 580 5th Avenue, Oxford 5-5898	
Philadelphia 3...R. Bernard Alexander, David G. Conner, T. E. Robertson, Architects Bldg., 17th & Sansom Sts., Rittenhouse 6-0470	
Pittsburgh 22...John B. Thomas, Henry W. Oliver Bldg., Atlantic 1-4705	
St. Louis 1...James H. Cash, Continental Bldg., 3615 Olive St., Jefferson 5-4867	
San Francisco 4...John W. Otterson, 68 Post St., Douglas 2-4600	
Seattle 1...Herbert L. Lester, McGraw-Hill Co., Ltd., 55 Farrington St., London, N. C. 4	

A Declaration of Interdependence

The free world stands to gain much from the understanding just reached by Pres. Eisenhower and Prime Minister Macmillan. The two democratic leaders met in Washington at a moment when Sputnik and Soviet gains in the Middle East threatened to put the Western Alliance in sad disarray. Now they have at least set the stage for a recovery in Western fortunes.

As their starting point, Eisenhower and Macmillan have declared that the U. S. and Britain must live by a basic, though long neglected, principle of the Atlantic Alliance—the principle that national self-sufficiency is out of date and that only by combining their resources can the countries of the free world achieve security.

As a concrete step in this direction, Eisenhower and Macmillan agreed to pool the scientific knowledge of the U. S. and Britain and, so far as possible, of all the NATO allies. Already in the planning stage is a division of responsibility between the U. S. and Britain for developing future nuclear weapons. To make this possible, Eisenhower will ask Congress to amend the provisions of the Atomic Energy Act that limit the exchange of atomic information.

In another move of some importance, the two Western leaders privately agreed that they both would attend the next meeting of the NATO council, to be held probably in December. At this meeting the heads of government can themselves probe deeper into the whole of Western defense. And finally, Eisenhower and Macmillan issued a warning to Moscow to be careful in the Middle East. They did this by underlining the pledge of all NATO members to defend Turkey in case of a Soviet attack against that country.

After the recent demonstrations of Soviet power, there can be no doubt about the need to mobilize all the strength available in the West. In the case of scientific pooling, this involves the Administration in the ticklish job of amending the Atomic Energy Act and erasing the specter of Klaus Fuchs, the British scientist who fed atomic information to the Russians at a time when British security regulations were far less strict than they are today.

But we are sure that most Americans, and a sizable majority of congressmen, are ready to run the risk of sharing secrets in order to gain the advantages of a cooperation with the British in developing nuclear weapons, including missiles.

It may be too much to expect a repetition of the wartime partnership with Britain that produced such spectacular developments as radar and atomic energy. But we are convinced that a joint effort still holds out very great possibilities. And we are equally convinced that if the Administration should falter in its present intentions, or if Congress should balk at the implications of the Eisenhower-Macmillan

agreement, this country might just as well write off NATO, including the U. S.-British Alliance that forms its core.

The Crucial Moment

In monetary management—as in such diverse arts as cookery, music, and whistling at girls—a sense of timing makes all the difference. The opportunity for doing the right thing can run out in a matter of days, or even hours.

By all indications, the Federal Reserve is coming up to a crucial point in its money and credit policy. For nearly three years, the Fed has been clamping down on credit with increasing vigor, first with the object of slowing the rate of business expansion, later with the avowed intention of rolling back the recent increases in the cost of living.

The Fed has not succeeded in pushing consumer prices down, but there is ample evidence that any inflationary wind has been knocked out of other areas of the economy. The stock market has gone into a tailspin. Business is trimming down its plans for investment. Demand in many basic industries has failed to keep pace with the growth of capacity. Corporate profits are running well behind last year—reflecting in part the painful increase in borrowing costs that tight money has brought.

Obviously, the Fed has no intention of continuing a tough line in the face of a real slide in business. But the danger is that it will wait too long to be sure that the turn has come. If it makes that mistake, it will then have to do something really drastic when it finally does move.

This is just what happened in 1953. As BUSINESS WEEK pointed out at the time, the Fed waited until there was almost a money panic before taking its foot off the credit brake. Then, to reassure a shaken market, it made a drastic cut in reserve requirements. This overcompensation laid the basis for the very price inflation that the Fed has been fighting.

Now, as we come up to another turning point, the timing once again is vital. A small move toward ease, taken promptly, will be far better than massive rescue efforts that come too late.

As a minimum step, we suggest that the Fed immediately abolish the 2% additional reserve requirement that now applies to New York and Chicago banks. These two financial centers are feeling the money strain most acutely. Removing the differential would take some of the pressure off them at the same time that it eliminated a now useless remnant of an outmoded theory of reserves.

This week, a gesture may be enough to set the tone for the market. A month from now—or two months, or three months—the Fed may find that all the king's horses and all the king's men can't do it.

SHERATON

the proudest name in HOTELS



For Direct-Line
Teletype
reservations at any
Sheraton Hotel,
call the
Sheraton
nearest you

EASTERN DIV.

NEW YORK
Park-Sheraton
Sheraton-Astor
Sheraton-McAlpin
Sheraton-Russell

BOSTON
Sheraton-Plaza

WASHINGTON
Sheraton-Carlton
Sheraton-Park

PITTSBURGH
Penn-Sheraton
(formerly Wm. Penn)

BALTIMORE
Sheraton-Belvedere

PHILADELPHIA
Sheraton Hotel

PROVIDENCE
Sheraton-Biltmore

SPRINGFIELD, Mass.
Sheraton-Kimball

ALBANY
Sheraton-Ten Eyck

ROCHESTER
Sheraton Hotel

BUFFALO
Sheraton Hotel

SYRACUSE
Sheraton-Syracuse Inn
Sheraton-DeWitt Motel

MIDWESTERN DIV.

CHICAGO
Sheraton-Blackstone
Sheraton Hotel

DETROIT
Sheraton-Cadillac

CINCINNATI
Sheraton-Gibson

ST. LOUIS
Sheraton-Jefferson

OMAHA
Sheraton-Fontenelle

LOUISVILLE
Sheraton-Seelbach
The Waterston

DALLAS
Sheraton Hotel
Opens 1959

KRKN
Sheraton Hotel

INDIANAPOLIS
Sheraton-Lincoln

FRENCH LICK, Ind.
French Lick-Sheraton

RAPID CITY, S. D.
Sheraton-Johnson

SIOUX CITY, IOWA
Sheraton-Martin
Sheraton-Warrior

SIOUX FALLS, S. D.
Sheraton-Carpenter
Sheraton-Cataract

CEDAR RAPIDS, IOWA
Sheraton-Montrose

PACIFIC DIV.

SAN FRANCISCO
Sheraton-Palace

LOS ANGELES
Sheraton-Town House

PASADENA
Huntington-Sheraton

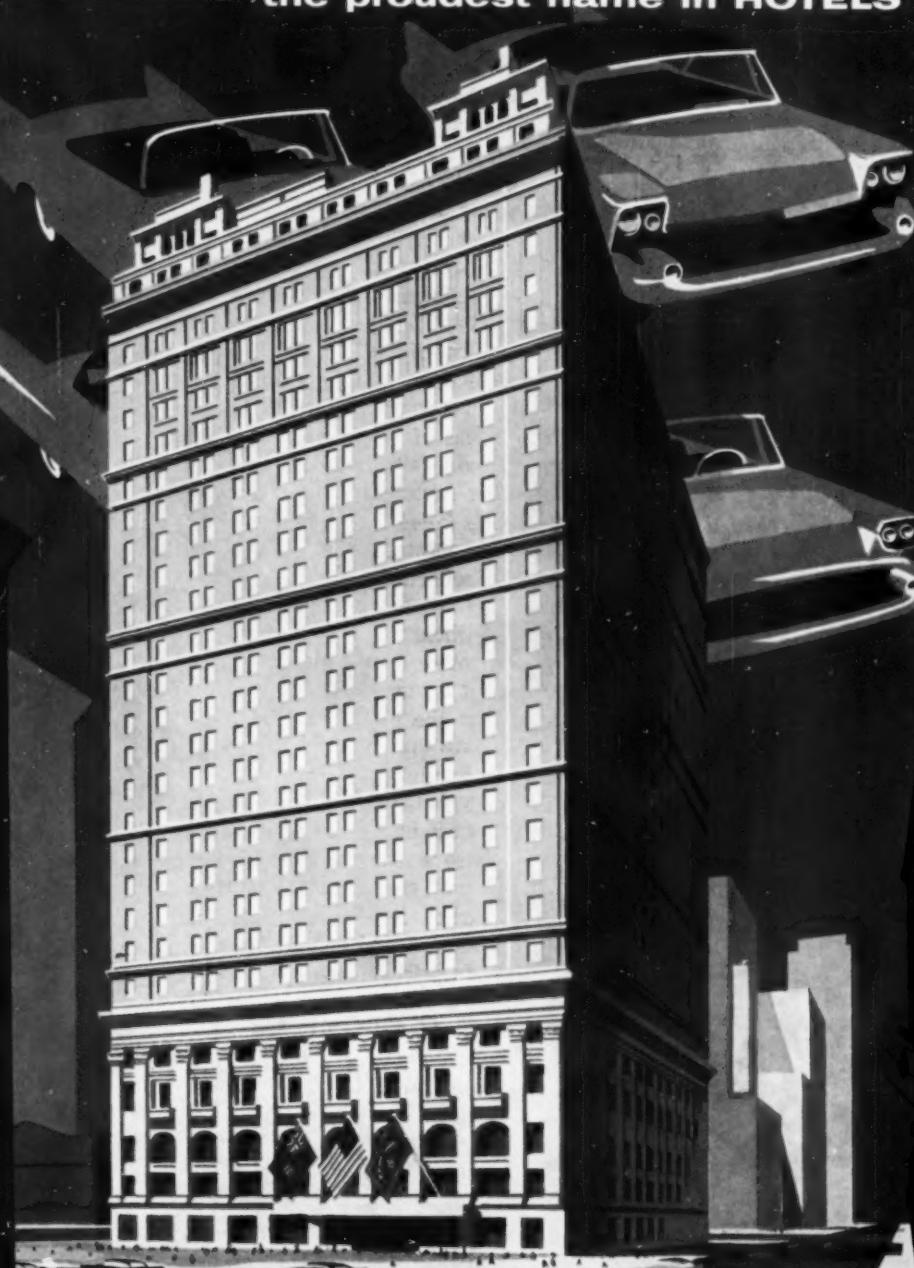
CANADIAN DIV.

MONTRÉAL
Sheraton-Mt. Royal
The Laurentian

TORONTO
King Edward Sheraton

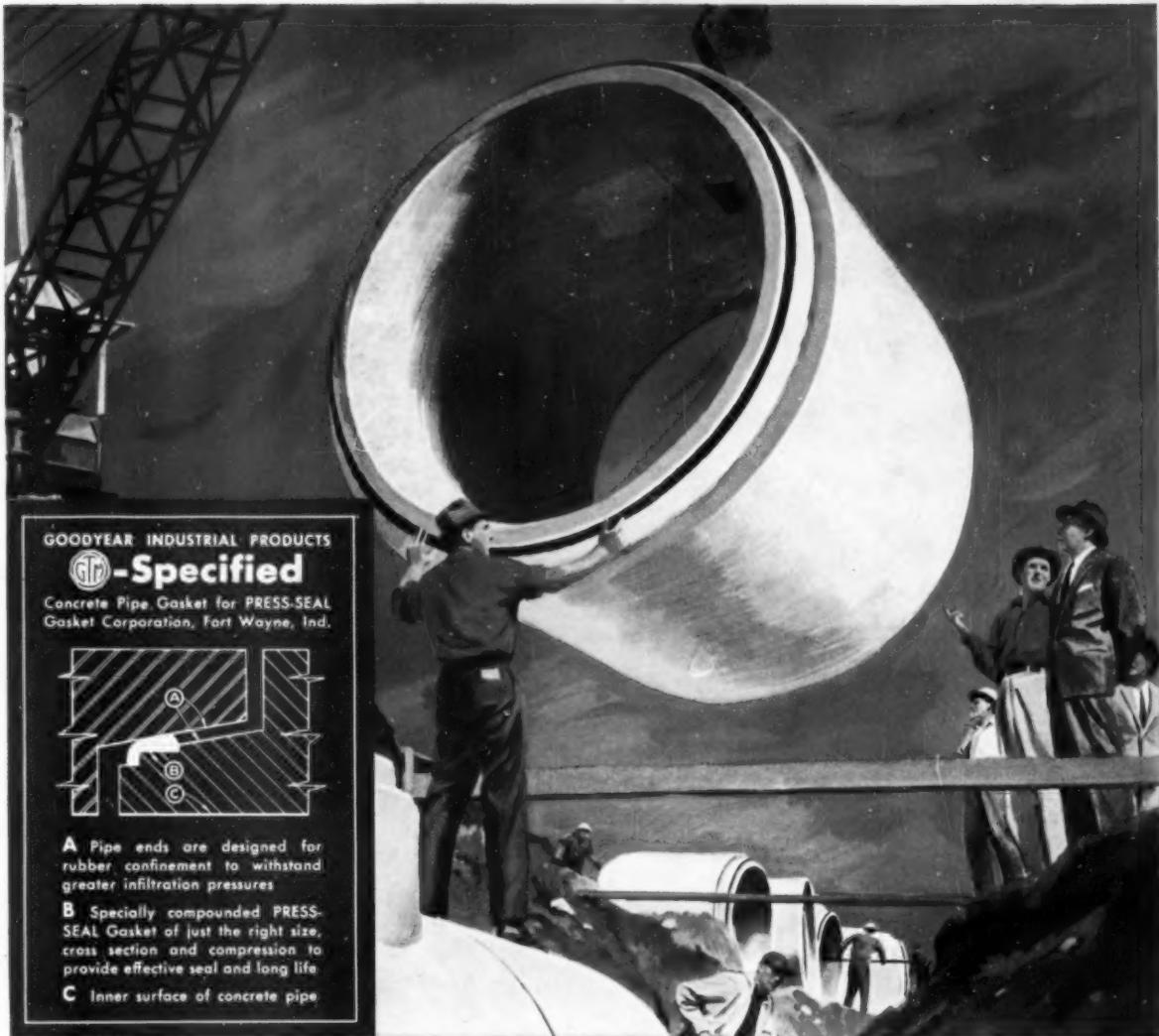
NIAGARA FALLS, Ont.
Sheraton-Brock

HAMILTON, Ont.
Royal Connaught



DETROIT: The SHERATON-CADILLAC HOTEL

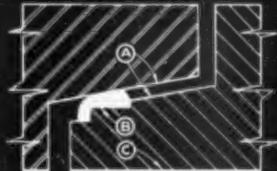
Here in the gathering place of automotive tycoons . . . in the modern, luxurious headquarters for businessmen visiting Detroit . . . you will quickly capture the Motor City mood. Home of the famous Book Casino and the fabulous Motor Bar.



GOODYEAR INDUSTRIAL PRODUCTS

GR-Specified

Concrete Pipe Gasket for PRESS-SEAL
Gasket Corporation, Fort Wayne, Ind.



A Pipe ends are designed for rubber confinement to withstand greater infiltration pressures

B Specially compounded PRESS-SEAL Gasket of just the right size, cross section and compression to provide effective seal and long life

C Inner surface of concrete pipe

How to put the lid on sealing costs

It's money down the drain—a healthy chunk, too—when a king-sized sanitary sewer must be dug up to correct serious leakage. Yet failure at the joints—leakage in or out—was long a bugaboo of sewage systems the country over.

Many materials were tried in the search for an effective seal. But even rubber, a seeming natural, couldn't make the grade. That is, until a Midwestern manufacturer teamed up with the G.T.M.—Goodyear Technical Man.

The end result of their joint effort was a precision-molded gasket, especially designed and compounded to the job.

So effective was its seal, and so long its life, that it has won the approval of Government and civil authorities alike.

And that's just one example of the G.T.M.'s unmatched experience in producing gaskets or other closures, ranging from hydraulic seals of pencil-head size to mammoth 100-foot-long waterstops for dams—in rubber or plastics. For a seal that will sell your product, see the G.T.M. Or write Goodyear, Industrial Products Division, St. Marys, Ohio, Los Angeles 54, California, or Akron 16, Ohio.

MOLDED AND EXTRUDED GOODS by

GOOD **YEAR**

THE GREATEST NAME IN RUBBER